



SEQUENCE LISTING

<110> GIORGI, DOMINIQUE
SAFFIN, JEAN-MICHEL
ROUQUIER, SYLVIE

<120> NOVEL CENTROSOME-ASSOCIATED PROTEIN AND APPLICATIONS
THEREOF

<130> 1169-036

<140> 10/540,493

<141> 2005-06-24

<150> PCT/FR03/003895

<151> 2003-12-24

<150> FR 02 16648

<151> 2002-12-24

<160> 53

<170> PatentIn Ver. 3.3

<210> 1

<211> 647

<212> PRT

<213> Homo sapiens

<400> 1

Met Ser Asp Glu Val Phe Ser Thr Thr Leu Ala Tyr Thr Lys Ser Pro
1 5 10 15

Lys Val Thr Lys Arg Thr Thr Phe Gln Asp Glu Leu Ile Arg Ala Ile
20 25 30

Thr Ala Arg Ser Ala Arg Gln Arg Ser Ser Glu Tyr Ser Asp Asp Phe
35 40 45

Asp Ser Asp Glu Ile Val Ser Leu Gly Asp Phe Ser Asp Thr Ser Ala
50 55 60

Asp Glu Asn Ser Val Asn Lys Lys Met Asn Asp Phe His Ile Ser Asp
65 70 75 80

Asp Glu Glu Lys Asn Pro Ser Lys Leu Leu Phe Leu Lys Thr Asn Lys
85 90 95

Ser Asn Gly Asn Ile Thr Lys Asp Glu Pro Val Cys Ala Ile Lys Asn
100 105 110

Glu Glu Glu Met Ala Pro Asp Gly Cys Glu Asp Ile Val Val Lys Ser
115 120 125

Phe Ser Glu Ser Gln Asn Lys Asp Glu Glu Phe Glu Lys Asp Lys Ile
130 135 140

Lys Met Lys Pro Lys Pro Arg Ile Leu Ser Ile Lys Ser Thr Ser Ser
 145 150 155 160
 Ala Glu Asn Asn Ser Leu Asp Thr Asp Asp His Phe Lys Pro Ser Pro
 165 170 175
 Trp Pro Arg Ser Met Leu Lys Lys Lys Ser His Met Glu Glu Lys Asp
 180 185 190
 Gly Leu Glu Asp Lys Glu Thr Ala Leu Ser Glu Glu Leu Glu Leu His
 195 200 205
 Ser Ala Pro Ser Ser Leu Pro Thr Pro Asn Gly Ile Gln Leu Glu Ala
 210 215 220
 Glu Lys Lys Ala Phe Ser Glu Asn Leu Asp Pro Glu Asp Ser Cys Leu
 225 230 235 240
 Thr Ser Leu Ala Ser Ser Ser Leu Lys Gln Ile Leu Gly Asp Ser Phe
 245 250 255
 Ser Pro Gly Ser Glu Gly Asn Ala Ser Gly Lys Asp Pro Asn Glu Glu
 260 265 270
 Ile Thr Glu Asn His Asn Ser Leu Lys Ser Asp Glu Asn Lys Glu Asn
 275 280 285
 Ser Phe Ser Ala Asp His Val Thr Thr Ala Val Glu Lys Ser Lys Glu
 290 295 300
 Ser Gln Val Thr Ala Asp Asp Leu Glu Glu Glu Lys Ala Lys Ala Glu
 305 310 315 320
 Leu Ile Met Asp Asp Asp Arg Thr Val Asp Pro Leu Leu Ser Lys Ser
 325 330 335
 Gln Ser Ile Leu Ile Ser Thr Ser Ala Thr Ala Ser Ser Lys Lys Thr
 340 345 350
 Ile Glu Asp Arg Asn Ile Lys Asn Lys Lys Ser Thr Asn Asn Arg Ala
 355 360 365
 Ser Ser Ala Ser Ala Arg Leu Met Thr Ser Glu Phe Leu Lys Lys Ser
 370 375 380
 Ser Ser Lys Arg Arg Thr Pro Ser Thr Thr Thr Ser Ser His Tyr Leu
 385 390 395 400
 Gly Thr Leu Lys Val Leu Asp Gln Lys Pro Ser Gln Lys Gln Ser Ile
 405 410 415
 Glu Pro Asp Arg Ala Asp Asn Ile Arg Ala Ala Val Tyr Gln Glu Trp
 420 425 430
 Leu Glu Lys Lys Asn Val Tyr Leu His Glu Met His Arg Ile Lys Arg
 435 440 445

Ile Glu Ser Glu Asn Leu Arg Ile Gln Asn Glu Gln Lys Lys Ala Ala
 450 455 460
 Lys Arg Glu Glu Ala Leu Ala Ser Phe Glu Ala Trp Lys Ala Met Lys
 465 470 475 480
 Glu Lys Glu Ala Lys Lys Ile Ala Ala Lys Lys Arg Leu Glu Glu Lys
 485 490 495
 Asn Lys Lys Lys Thr Glu Glu Glu Asn Ala Ala Arg Lys Gly Glu Ala
 500 505 510
 Leu Gln Ala Phe Glu Lys Trp Lys Glu Lys Lys Met Glu Tyr Leu Lys
 515 520 525
 Glu Lys Asn Arg Lys Glu Arg Glu Tyr Glu Arg Ala Lys Lys Gln Lys
 530 535 540
 Glu Glu Glu Thr Val Ala Glu Lys Lys Lys Asp Asn Leu Thr Ala Val
 545 550 555 560
 Glu Lys Trp Asn Glu Lys Lys Glu Ala Phe Phe Lys Gln Lys Lys Lys
 565 570 575
 Glu Lys Ile Asn Glu Lys Arg Lys Glu Glu Leu Lys Arg Ala Glu Lys
 580 585 590
 Lys Asp Lys Asp Lys Gln Ala Ile Asn Glu Tyr Glu Lys Trp Leu Glu
 595 600 605
 Asn Lys Glu Lys Gln Glu Arg Ile Glu Arg Lys Gln Lys Lys Arg His
 610 615 620
 Ser Phe Leu Glu Ser Glu Ala Leu Pro Pro Trp Ser Pro Pro Ser Arg
 625 630 635 640
 Thr Val Phe Ala Lys Val Phe
 645

<210> 2
 <211> 25
 <212> PRT
 <213> Homo sapiens

<400> 2
 Met Ser Asp Glu Val Phe Ser Thr Thr Leu Ala Tyr Thr Lys Ser Pro
 1 5 10 15
 Lys Val Thr Lys Arg Thr Thr Phe Gln
 20 25

<210> 3
 <211> 28
 <212> PRT
 <213> Homo sapiens

4

<400> 3

Asp Glu Leu Ile Arg Ala Ile Thr Ala Arg Ser Ala Arg Gln Arg Ser
1 5 10 15

Ser Glu Tyr Ser Asp Asp Phe Asp Ser Asp Glu Ile
20 25

<210> 4

<211> 107

<212> PRT

<213> Homo sapiens

<400> 4

Val Ser Leu Gly Asp Phe Ser Asp Thr Ser Ala Asp Glu Asn Ser Val
1 5 10 15

Asn Lys Lys Met Asn Asp Phe His Ile Ser Asp Asp Glu Glu Lys Asn
20 25 30

Pro Ser Lys Leu Leu Phe Leu Lys Thr Asn Lys Ser Asn Gly Asn Ile
35 40 45

Thr Lys Asp Glu Pro Val Cys Ala Ile Lys Asn Glu Glu Glu Met Ala
50 55 60

Pro Asp Gly Cys Glu Asp Ile Val Val Lys Ser Phe Ser Glu Ser Gln
65 70 75 80

Asn Lys Asp Glu Glu Phe Glu Lys Asp Lys Ile Lys Met Lys Pro Lys
85 90 95

Pro Arg Ile Leu Ser Ile Lys Ser Thr Ser Ser
100 105

<210> 5

<211> 76

<212> PRT

<213> Homo sapiens

<400> 5

Ala Glu Asn Asn Ser Leu Asp Thr Asp Asp His Phe Lys Pro Ser Pro
1 5 10 15

Trp Pro Arg Ser Met Leu Lys Lys Lys Ser His Met Glu Glu Lys Asp
20 25 30

Gly Leu Glu Asp Lys Glu Thr Ala Leu Ser Glu Glu Leu Glu Leu His
35 40 45

Ser Ala Pro Ser Ser Leu Pro Thr Pro Asn Gly Ile Gln Leu Glu Ala
50 55 60

Glu Lys Lys Ala Phe Ser Glu Asn Leu Asp Pro Glu
65 70 75

<210> 6
 <211> 31
 <212> PRT
 <213> Homo sapiens

<400> 6
 Asp Ser Cys Leu Thr Ser Leu Ala Ser Ser Ser Leu Lys Gln Ile Leu
 1 5 10 15
 Gly Asp Ser Phe Ser Pro Gly Ser Glu Gly Asn Ala Ser Gly Lys
 20 25 30

<210> 7
 <211> 83
 <212> PRT
 <213> Homo sapiens

<400> 7
 Asp Pro Asn Glu Glu Ile Thr Glu Asn His Asn Ser Leu Lys Ser Asp
 1 5 10 15
 Glu Asn Lys Glu Asn Ser Phe Ser Ala Asp His Val Thr Thr Ala Val
 20 25 30
 Glu Lys Ser Lys Glu Ser Gln Val Thr Ala Asp Asp Leu Glu Glu Glu
 35 40 45
 Lys Ala Lys Ala Glu Leu Ile Met Asp Asp Asp Arg Thr Val Asp Pro
 50 55 60
 Leu Leu Ser Lys Ser Gln Ser Ile Leu Ile Ser Thr Ser Ala Thr Ala
 65 70 75 80
 Ser Ser Lys

<210> 8
 <211> 24
 <212> PRT
 <213> Homo sapiens

<400> 8
 Lys Thr Ile Glu Asp Arg Asn Ile Lys Asn Lys Lys Ser Thr Asn Asn
 1 5 10 15
 Arg Ala Ser Ser Ala Ser Ala Arg
 20

<210> 9
 <211> 54
 <212> PRT
 <213> Homo sapiens

<400> 9

Leu Met Thr Ser Glu Phe Leu Lys Lys Ser Ser Ser Lys Arg Arg Thr
 1 5 10 15

Pro Ser Thr Thr Thr Ser Ser His Tyr Leu Gly Thr Leu Lys Val Leu
 20 25 30

Asp Gln Lys Pro Ser Gln Lys Gln Ser Ile Glu Pro Asp Arg Ala Asp
 35 40 45

Asn Ile Arg Ala Ala Val
 50

<210> 10

<211> 32

<212> PRT

<213> Homo sapiens

<400> 10

Tyr Gln Glu Trp Leu Glu Lys Lys Asn Val Tyr Leu His Glu Met His
 1 5 10 15

Arg Ile Lys Arg Ile Glu Ser Glu Asn Leu Arg Ile Gln Asn Glu Gln
 20 25 30

<210> 11

<211> 54

<212> PRT

<213> Homo sapiens

<400> 11

Lys Lys Ala Ala Lys Arg Glu Glu Ala Leu Ala Ser Phe Glu Ala Trp
 1 5 10 15

Lys Ala Met Lys Glu Lys Glu Ala Lys Lys Ile Ala Ala Lys Lys Arg
 20 25 30

Leu Glu Glu Lys Asn Lys Lys Lys Thr Glu Glu Glu Asn Ala Ala Arg
 35 40 45

Lys Gly Glu Ala Leu Gln
 50

<210> 12

<211> 49

<212> PRT

<213> Homo sapiens

<400> 12

Ala Phe Glu Lys Trp Lys Glu Lys Lys Met Glu Tyr Leu Lys Glu Lys
 1 5 10 15

Asn Arg Lys Glu Arg Glu Tyr Glu Arg Ala Lys Lys Gln Lys Glu Glu
 20 25 30

Glu Thr Val Ala Glu Lys Lys Lys Asp Asn Leu Thr Ala Val Glu Lys
 35 40 45

Trp

<210> 13
 <211> 43
 <212> PRT
 <213> Homo sapiens

<400> 13
 Asn Glu Lys Lys Glu Ala Phe Phe Lys Gln Lys Lys Lys Glu Lys Ile
 1 5 10 15

Asn Glu Lys Arg Lys Glu Glu Leu Lys Arg Ala Glu Lys Lys Asp Lys
 20 25 30

Asp Lys Gln Ala Ile Asn Glu Tyr Glu Lys Trp
 35 40

<210> 14
 <211> 41
 <212> PRT
 <213> Homo sapiens

<400> 14
 Leu Glu Asn Lys Glu Lys Gln Glu Arg Ile Glu Arg Lys Gln Lys Lys
 1 5 10 15

Arg His Ser Phe Leu Glu Ser Glu Ala Leu Pro Pro Trp Ser Pro Pro
 20 25 30

Ser Arg Thr Val Phe Ala Lys Val Phe
 35 40

<210> 15
 <211> 2575
 <212> DNA
 <213> Homo sapiens

<400> 15
 acttccttcg tctgggtggt tgccccagcg acacgttggg ccgaagagcg gtggtgggta 60
 cccgagagac ccggcggtgg ggaagtcact tcctcccgaa gacgctgttt cctagcaacc 120
 gccctccgcc tctgttatta gccctcctc ctcgctcggt ccaggaccgg ctctgcgggc 180
 gccgccaggc ccagaccaag ctactatcag aagttgaatt ctaataatta gctattttat 240
 aaaggtaacg agaaaaaata cactatgtct gatgaagttt ttagcaccac tttggcatat 300
 acaaagagtc caaaagttac caaaagaact actttccagg atgagctaata aagagcaatt 360
 acagctcgct cagccagaca aaggagttct gaatactcag atgactttga cagtgatgag 420
 attgtttctt taggtgattt ttctgacact tcagcagatg aaaattcagt taataaaaaa 480
 atgaatgact ttcatatatc agatgatgaa gaaaagaatc cttcaaaaact attgtttttg 540
 aaaaccaata aatcaaacgg taacataacc aaagatgagc cagtgtgtgc catcaaaaat 600

gaagaggaaa	tggcacctga	tgggtgtgaa	gacattgttg	taaaatcttt	ctctgaatct	660
caaaataagg	atgaggaatt	tgaaaaagac	aaaataaaaa	tgaaacctaa	accagaatt	720
ctttcaattt	aaagcacatc	ttcagcagaa	aacaacagcc	ttgacacaga	tgatcacttt	780
aaaccatcac	cttggccaag	gagtatgtta	aaaaagaaaa	gtcacatgga	ggagaaggat	840
ggactagaag	ataaagaaac	tgccctcagt	gaagaattgg	agttacattc	tgcaccttct	900
tcccttccaa	cgccgaatgg	catacaatta	gaagctgaga	aaaaagcatt	ctctgaaaac	960
cttgatcctg	aggattcatg	cttaacaagt	ctagcatcat	catcacttaa	acaaattctt	1020
ggagattctt	tttcaccagg	atctgagggg	aacgcatctg	gaaaagatcc	aaatgaagaa	1080
atcactgaaa	accataattc	cttgaaatca	gatgaaaata	aagagaattc	atcttcagca	1140
gaccatgtga	ctactgcagt	tgagaaatcc	aaggaaaagtc	aagtgactgc	tgatgacctt	1200
gaagaagaaa	aggcaaaagc	ggaactgatt	atggatgatg	acagaacagt	tgatccacta	1260
ctatctaaat	ctcagagtat	cttaatatct	accagtgcga	cagcatcttc	aaagaaaaca	1320
attgaagata	gaaatataaa	gaataaaaaag	tcaacaaata	atagagcatc	cagtgcattc	1380
gccagattaa	tgacctctga	gtttttgaag	aatcttagtt	ctaaaaggag	aactccatcg	1440
acaactacct	cttctcacta	tttagggact	ttaaaagtct	tggaccaaaa	accttcacag	1500
aaacagagca	tagaacctga	tagagcagat	aacataaggg	cagctgttta	tcaggagtgg	1560
ttagaaaaga	aaaatgtata	tttacatgaa	atgcacagaa	taaaaagaat	tgaaagtgaa	1620
aacttaagga	tccaaaatga	acagaaaaaa	gctgctaaaa	gagaagaagc	attagcatca	1680
tttgaggcct	ggaaggctat	gaaagaaaag	gaagcaaaga	aaatagctgc	caaaaagagg	1740
cttgaagaaa	aaaacaagaa	gaaaactgaa	gaagaaaatg	ctgcaagaaa	aggagaagca	1800
ctacaagctt	ttgaaaaatg	gaaagagaaa	aagatggaat	atcttaaaga	gaaaaataga	1860
aaggagagag	aatatgaaag	agcaaagaaa	cagaaagagg	aggaaactgt	tgccgagaaa	1920
aagaaagata	atttaactgc	tggtgagaaa	tggaaatgaaa	aaaaggaagc	ttttttcaag	1980
caaaagaaaa	aagaaaaaat	aaatgagaaa	agaaagggaag	aactgaaaag	agctgagaaa	2040
aaagataaag	ataaacaagc	tattaatgaa	tatgaaaaat	ggctggaaaa	taaggaaaaa	2100
caagaaagaa	ttgaacgaaa	acagaagaaa	cgtcatttct	ttcttgaaag	tgaggcactt	2160
cctccgtgga	gccctccaag	cagaactgtg	ttcgcaaaaag	tgttttgata	attctagtct	2220
ttacattatt	tggttattta	tcggtttgcc	aatattagcc	atagatttaa	accattcaat	2280
tatttatagt	tagaggaata	tattttaatt	aaatgccaga	cactcctgct	gacaatgaaa	2340
gaaatacttt	ggaatgtaat	cagtgaagac	atctttttga	actgtagata	aactgcctca	2400
aacaaagacc	taataatcag	attgttttta	ccattaagat	acataagatt	ttatcatgtc	2460
ctgataattc	ttatggtgga	gtgattcatg	atctttttca	ttaagctctg	tatgttattt	2520
aagtatatatt	aattccagta	ataaaaagga	aatcatctag	gtaccataaa	aaaaa	2575

<210> 16

<211> 29750

<212> DNA

<213> Homo sapiens

<400> 16

tctgggtggg	agttgggagg	gtcctgtctc	ctaggcaaca	gcacatgcac	acaagcgacc	60
aataatgagc	ccctctccaa	agacccagga	aggtgatgtc	acttccttcg	tctgggtggg	120
tgccccagcg	acacgttggg	ccgaagagcg	gtgttgggta	cccagagagc	ccggcggtgg	180
ggaagtcact	tccctccgaa	gacgtgtttt	cctagcaacc	gccctccgcc	tctgttatta	240
gcccctcctc	ctcgctcggt	ccaggaccgg	ctctgcgggc	gccgccaggc	ccagaccaag	300
gtgagcagct	cctaccgat	gcttggctct	tgattctcag	ggctcgaggag	aactggccgc	360
ggcggtccgg	ggccgggaac	agaaagcggg	acctgggggc	catgggggat	ccggacagag	420
accgcgcttg	gacgtgcacg	ggcctggcgt	tcgctggtgc	tcagcatacg	gcgcggtgag	480
gagcggcgag	caccgggacg	tcacctggcc	tggtagggaa	cggaaaccgg	ggcgcacaa	540
gctatgggag	gccctgccag	gcctctgtct	cgagtacggg	aaaccgcgat	tttaatgcgg	600
ctcatcgaga	aagcttcgtc	gttttgtctg	gctctcttta	acacttttgt	gagaggaaaa	660
attggcttgc	aatacatctc	gctggctgtt	tcggggttag	cattacgata	tttttctttg	720
aatagcgctg	tatgcaaata	tatagataca	tttttttttt	ggtgggtggg	ctcataattt	780
ttacgcccag	gacccctttt	atggcctttt	aaataagacg	tgacttattt	tgaaggcaat	840
gttatacttt	agaagagagg	tgaaaaataa	ggtgttctat	tttaattggc	agcattttgt	900
cgtattaact	tgtaatcatt	tatttgcaga	ctttttaagt	agttgcaaaa	ctatttttag	960
ataacttcca	tttgaatttt	tttaacaag	cttggtatga	gaatttgcta	tttctttaca	1020

agaacctttt	taagtgaaga	tgtagcccaa	tgttcatatc	agatgctttt	ctttgacctt	1080
tgtggggaga	gtagaatcaa	atgtaataaa	ataaattctg	aagcatgcga	agtctgattt	1140
gttttgtata	tttcagctac	tatcagaagt	tgaattctaa	taattagcta	ttttataaa	1200
gtaacgagaa	aaaatacact	atgtctgatg	aagtttttag	caccactttg	gcatatacaa	1260
agagtccaaa	agttaccaa	agaactactt	tccaggtaaa	gtatttttat	ttggaatcat	1320
ttcacagtgt	aaacactgta	ttagatgggt	tgaaattggt	gattctagaa	cagtcctata	1380
taaagcaggg	gtaaatctta	tattactttt	gagggtttgc	acatgatcat	gtttgggctc	1440
catccagtat	tacaaactcc	cctatatggg	tttaagacta	ccaaagtagc	ctcaatacta	1500
gtttcctact	aagttaaaa	ttgaatcgca	accttaaat	gccattttta	tataaaaact	1560
tttttttctg	ttgtaacata	atgtttaagt	ttttttttct	gttgagtcac	tgcaattttg	1620
aactcagcct	ctaagtttgc	aatattgatt	gcattccatt	ctgaaatatg	ccgagacaaa	1680
agctcttaaa	aataccaatt	tctttcaaaa	taccagtttt	taataaatta	taatctaaat	1740
tgagccctt	cttattttgt	accctccagc	tctaattata	acctgcaatt	aatttgttcc	1800
ataatgtgtg	tctcctctag	ttaaactgcg	agctccatga	ggaagggttc	ttgtctgtga	1860
tgctctgcat	tgagtatgag	gcgtaaagtg	ggtagatggc	ataaagtgag	cttgaggaa	1920
atatttgtta	gatgaatgaa	acctaaagtt	gaaagcagtc	gttaatcaag	cattgtttgt	1980
ttaaagaatt	acttgtgaat	atgatacctc	catgtttgga	tggaattga	tttcagtatc	2040
tcatttccag	atgagcta	aagagcaatt	acagctcgct	cagccagaca	aaggagttct	2100
gaatactcag	atgactttga	cagtgtatgag	atgggtatgt	gacagtatgg	aaacgtgaac	2160
cacttttctt	ctttttgctt	ccttagtttt	gtatttagcc	agcccccaa	ccacccatcc	2220
cctcaatcac	gtatgttaaa	ataataccta	agcattcact	aatttttagat	tttcaacttt	2280
ttatttagta	gaaagccact	cttaattttc	aggaagttgt	atgattttct	ttttttattg	2340
ttgttttgtt	ttctgaatgt	gtatacgaaa	atataaatta	attgatggca	ggtttgcagt	2400
aaaaggatgg	ctgccagtgg	taaaccacat	tgaagaagac	aggttcattc	taaagatcaa	2460
ccctaggagg	tgctacagct	agttagtaac	tagtcccaca	gaactaaact	tcggtgcaca	2520
ttagaagtgc	ttttataaag	cttgctataa	atcagatttt	ttttggctgt	gataaggggt	2580
aaatttaaaa	accacagact	cttcgtgttt	catatatcag	tactattata	atttggtttc	2640
tcttagctat	gtaaacatat	taacatttta	gtttcaggta	taagcataca	gaattctaaa	2700
cttggtgttt	ttgtttgttt	gtttttgttt	ttgagatgga	gtctcgctca	gttgctcaag	2760
ctggagtgc	gtggtgcaat	ctcggtcacc	tgcaacctcc	acctcccagg	ttcaagtgtat	2820
tctctcctt	cagcctcctg	agtagctggg	actacagggtg	cccggccacca	tgccgggcta	2880
atttttgtat	tttttagtaga	gatgggggttt	caccacatcg	gccaggctgg	tctcgaactc	2940
ctgacctgt	gatccgccc	cctcagcctc	ccaaagtgt	gggattatag	gtgtgagcca	3000
ccgcacccgg	cctgggtgtt	tattctttaa	aatttggtga	ataattgtaa	ttgatttctg	3060
taaaaccagt	aataaccaca	gttaaatcac	tgctgtatag	ttaaacttagc	atttcttatg	3120
attcttagta	aatctaatat	tctggtgtgg	atggaattgt	agttccaaaa	tttttatgga	3180
aaaaatataa	ttagtaatta	ctaattaaat	tcttccattt	acaaatgttc	ttgattttac	3240
atgaagaagt	aatttgcaaa	taaaagtttt	acagtcacata	atctaattta	aatgctacat	3300
gactgattgt	tagggacctt	tggatggctt	tttccagagc	aaacagtgtt	tggttgtttg	3360
gtacctaca	gacaacacaa	taaatacatt	ttgaataaat	taatgaaatt	ggaattttta	3420
tttcataaat	gttaatgaga	cgtgcctgag	ttagctgtgt	tttttagagct	gcaagtctat	3480
ttataaaaat	catttgtgcc	tattcattgt	tagaattttg	tttgtagctt	ttaaggtaaa	3540
ctttgattaa	gttaacgtaa	ccttgacaat	ttttaaaaat	actggtgaaa	acatttttct	3600
tttccatttt	tcagtttctt	taggtgattt	ttctgacact	tcagcagatg	aaaattcagt	3660
taataaaaaa	atgaatgact	ttcatatatc	agatgatgaa	gaaaagaatc	cttcaaaaact	3720
attgtttttg	aaaaccaata	aatcaaacgg	taacataacc	aaagatgagc	cagtgtgtgc	3780
catcaaaaat	gaagaggaaa	tggcacctga	tgggtgtgaa	gacattgttg	taaaatcttt	3840
ctctgaatct	caaaaataagg	atgaggaatt	tgaaaaagac	aaaataaaaa	tgaaacctaa	3900
accagaatt	ctttcaatta	aaagcacatc	ttcaggtaat	ttgttaggat	tactgtaatt	3960
gcatttcttg	gaagtttatt	ttaaagataat	cagtcccaaa	atttttatat	ggtagctagt	4020
atatatttaa	gaaaaaaaga	cagacttaac	ttccatttta	cagacctgtt	gtattttgtc	4080
taacttcaat	tttacagacc	tgttgtattt	tgtctaactt	caattttaca	gacctgttgt	4140
attttgtctt	gcatctaggc	tgttgcctga	tagaaaagcca	aagcacaaag	ccaaagcacc	4200
tttagtcatc	catagcatcc	atagctgtgg	atctccagac	acctagacct	gtgagcttca	4260
gttttgtttg	taggtgtgga	actggaatgg	aatgctgtct	aatccctctc	acactccaaa	4320
gattagagtt	acagcaatat	tgagactaat	ccttctaaca	gtctttgcca	taccaacatt	4380
gtgccagaaa	attttcttga	catttgtata	tttgaaggat	gagttatgtt	atttctgtctg	4440
ttgtttgttg	aagcatccag	gcactcctta	agagaatctc	catttgatct	ctgtattgcc	4500

tatgaaaatc	tactaagatt	cagttttcca	aaggaaagtt	cctgggtgtga	tctggggatta	4560
cagtttagttc	tgcccacaat	tttactgaat	tttaagcata	aaggaaacaaa	gatagaatga	4620
aacgggagacc	aagtccctgtc	acataccctg	ggccaccatt	catgaacttg	tatatgcaag	4680
gttaaggatt	ttttgttttt	cattctttgt	atttttataaa	ggaattatta	gttgatgtta	4740
accttcataa	aaatctcctt	gcataatc	agtaaatata	gtgctggtaa	atatttcata	4800
ctttgcatat	tagataccag	tggtaacgtc	agacaaaact	ttatttcagg	catgtatttg	4860
ggaactgctc	ctttcttcct	gaccccaaaa	tctcattaac	tttgaaatga	gcaaaggatg	4920
taagcagagc	aaagaacact	agaataatat	ccaggacact	gggggaaagg	cctctgtata	4980
ttatatatga	cttcagcaaa	taagttaagc	ttcagtatcc	tcatgatgag	gaagctaaaa	5040
ataaccctct	ttctattcct	gcaaaattgt	gagagtttat	tgaagtgc	ctcataaact	5100
ataaaaaaat	acaaaaatgc	aaacagatgc	ataatgaaac	aattaaacttg	ttaaaaatga	5160
ccttctaagt	atagtgaagt	aaatcaatgc	tggagagaag	aggaacataa	ttgaaacttcg	5220
ttattaagaa	aatgacgagca	tatatagcaa	ctaaaaattt	gtctgagaca	gggtggatgta	5280
tataattaga	agtttatggg	agataatcag	gaaagcaata	atccacctat	ttcatacctt	5340
aaaaaaaaaa	aaaacctgtg	gtgggttaca	atgaataaga	aaatactgta	ttttaaccac	5400
aagggtggcat	caggatccta	aatgctctac	ttatatatgc	aatgttatat	tcagtacgtg	5460
taatatataa	ataattacct	aaataggtaa	ttgtatacat	tgattacca	aaaaagcgct	5520
tttcttaag	ataggcatt	ttttttcctt	tttgggaact	tgacagtact	tctggaaagt	5580
gaatttttgt	agaaaatata	ttaaagtgtg	cattctcagg	ttcttcagg	tgaaaagttaa	5640
aaattgaggg	tagtggttct	aagataatat	ctggcatata	taataagtat	ttaaatgaat	5700
aaattaatat	atgaatgatt	tatctttgaa	agaggggaata	tggttcatga	gtttatcctc	5760
taaattcttt	gacttttttt	ttttctgtac	aggtttgga	ctcaatgttt	ttaatgtggg	5820
gagatatgtc	tgagtagcaa	gtaatgcttt	atgaaactat	tagagcttga	aggttttctc	5880
tgtccttgct	tgtcttttgt	aaaaagtata	ataaccagac	tttatagtca	ctactgaagt	5940
gacagtgtgt	ctataaagt	aaagtatttt	tcacaggata	tgtttttatt	ttaatactaa	6000
catgactgaa	atcatgaact	ttggagtacg	gatgcttctc	ctttaatctg	agatctgcag	6060
cctgctagag	tttgtgactt	tgggcatgag	acctctttgt	tctcatttta	ttcatcttta	6120
aaaacgggat	aatagttgcc	tgcctctagg	agtttgaggc	aattaaatga	gttcacatat	6180
ttgaagtgtc	tagaatagta	ctggcataaa	tttagcactc	tataaatgtt	ctgattattc	6240
attttattat	ttagcgtttg	tttataaaca	tgtcagcag	gtataaagta	tcagtcagtc	6300
gggatgcgta	agttctagag	atctgctgta	cattgtgcct	atagtttaaca	gtactgtcct	6360
ttgcactgaa	tgtattaaga	aggtagatct	catgtttgtt	cttaccacaa	taataaaaaa	6420
aattgactca	acaccttctt	tcaggcatta	tataatattc	tgcttaaact	gaggctcaaa	6480
agacatgcaa	gcatttgtca	ggaggagaag	caggaagtgg	atattctagg	cagggggatc	6540
agcttaggta	aaggatatgt	agcaggagg	attggaggga	ttgtgggatg	tgtgcatgac	6600
aactgttagc	ccagcatttc	agaaaacacag	atgacaaaat	ggctgtagat	aaggcagtga	6660
aggacaaaac	cataaaaatcc	gttttatgtt	gtttaaaggc	agtttaagctt	ttattctgta	6720
ggattggatc	atggggagcc	attgaataat	ttttagagaa	ggagtgtatg	gatctgattt	6780
ggattttgta	aatatcatgg	aagcagtgat	ctaggaaaga	gtggataagg	acccgacagc	6840
agggatgtag	aaagtggaat	aaatgagata	tttggaatt	agaattgata	ggatatattg	6900
atactctgga	tttaggggat	aatagaggga	ggaatctaga	gcccttgat	ttgggggttg	6960
acatttggtc	ggagttagg	atgtagctaa	aattgtcagc	tacttataat	aataccaatt	7020
tggtaggtt	gtggaatctt	ctggcagaat	ccataagccc	attttttaggt	aaatgggagg	7080
aagatgttaa	ttagaccaat	tttgaagtgt	agaaaaatgc	atttgtagaa	caatagaaac	7140
ataaatatgt	atagcaggta	aaatgcaggc	aaaaaatata	tacatggaaa	gtcttcccat	7200
tgtttcgaat	actggatgca	aatcagcatt	tgattcttga	tttaaactta	gaagtaattg	7260
aaagagtga	attttaataa	atgctaaaga	agttttatgg	actcagaaca	attaactcat	7320
aaaagattcc	ttcctcta	gagagttagc	actcctatcc	cttgagtggc	aacatcatca	7380
tctttgtcct	tataatagca	cttataatct	tagtaatcta	gtcttgta	tttgtttaga	7440
aaaatcaacc	tgtaaagtac	ctggacaggt	ccattgcccgc	tttgttgatt	atgaggttta	7500
gtaacgtgta	cagggccttg	tactcaaagg	cttgatggat	gagcctcctc	atttttatagt	7560
ggtagaaact	ggggcaagat	tttgttttgt	ttttttattt	ttaacatttt	tttttttaata	7620
ttataagagt	tcacaatgtt	gaagagttaa	cttcttgtga	ctgggttactt	tcaggatgac	7680
aactgtttct	ttacttttgt	ttttttttgt	tgtgtgtgtt	gtttgggtttt	tttttttttt	7740
ttagatggat	ttttgtcctt	attaccagc	ctggagtgc	gtggtgtgat	ctcgatctcg	7800
gctcactgca	acctcagact	cctgggttca	agcaatcctc	ctgcctcagt	ctcctgagta	7860
gctgggatta	caggcacgcg	ctactaagcc	cggctaattt	ttttgtattt	ttagtagaga	7920
cagggtttca	ccgtgttagc	caggctgggtc	tcgaactcct	gacctcatga	tctgcccacc	7980

tcggcctccc	aacgtgctgg	gattacaggg	gtgagtcacc	gctcccaaca	tgctggggtc	8040
acaggcgtga	gccaccgcgt	ccggcctgat	tattaaccat	catttatattg	tgcttacta	8100
gagctctgtg	tagagaagag	ttgtgggctt	catctggact	cttcaggaca	gagaacaaag	8160
gggcataggg	acaggagggg	agtatggtag	caccagaga	gatagataaa	gccatggtca	8220
tttttttata	cacacacttt	aagcatttta	tttttcagca	gaaaacaaca	gccttgacac	8280
agatgatcac	tttaaaccat	cacctcgcc	aaggagtatg	ttgaaaaaga	aaagtcacat	8340
ggaggagaag	gatggactag	aagataaaga	aactgcctc	agtgaagaat	tggagttaca	8400
ttctgcacct	tcttcccttc	caacgccgaa	tggcatacaa	ttagaagctg	agaaaaaagc	8460
attctctgaa	aaccttgatc	ctgaggttag	cactaccact	aaactgttga	attgtgttct	8520
tgaatttatg	cttttttatc	tgattatgaa	aaagagaagg	agagaatgaa	tttgtgtgctg	8580
tgtgtgtgtg	ttttacatac	tttcttctgc	aactgataag	gaaataattt	ttaaaaatat	8640
actgtattcc	accgagtcta	aaactgcac	aattgtgaaga	cgtagcatta	ttttacatac	8700
cactaaggaa	gaaggaaatg	catccaatta	aactataaca	caccagtgat	tgtagagttt	8760
atccagtttt	agagaaagta	aaatgtcaaa	aagtgttgct	tttctgaatc	tatataatag	8820
tgtttatctt	taataatttt	ttaaatttat	gtatctttga	attatgtaat	ttatggctaa	8880
gaacaatata	gtcagtgtca	ttttatttat	ttgattttat	tcactcaaca	aatgtgtgtt	8940
gaatgttcat	ggcactcttc	tgtgttcttt	gggttatgtt	ccaatagcat	taaatgtggc	9000
ctttcaggtt	tccatcaggg	aatttactat	gcattgttat	taaggagaa	cacttcgttt	9060
ttctctttgt	atttactat	gagaagcaaa	ctgtcccttc	tgaacatttc	agaagggaaa	9120
agtacaggaa	gaacatttct	tccccataat	ctgcttgggc	agattaggga	actgcatgcc	9180
acctggccaa	gcttctttct	ttttctcatc	gcttgtctgc	agtgttggtg	cttaaggatc	9240
tgctctctgg	gaggtgaggg	agaaggtgct	gagaggagct	cttttgtgca	atgactaaat	9300
gggggaatcc	ccctaattca	gactggaagt	attaggaagc	acaataggct	accaattcaa	9360
atcttgttct	gcagttgagc	tttaccagta	aagctgacaa	tttgatatac	gcctaactga	9420
caccaccatg	ctgtttctta	atttgttctg	aaaaccagaa	gaagaaacc	aagcaaatat	9480
tttatattta	agaaaattat	ctgatccatt	gaatattgtg	ctagtttctt	gtagctgctg	9540
taacaaattg	ccacaaactg	gttaacttaa	aacaacagaa	atgtattctc	ttagtctctg	9600
aggtcagaag	tccaagatca	agggttttgc	agggccattt	tctctgaag	gcatacagg	9660
agaatccttc	cttgcctctt	ccagcttctt	tctagtgggt	gccagcagtc	catggcattc	9720
cttggtctgt	agctggcttg	tagctgcac	attcccttct	ctgccttcat	cccatgtggc	9780
cttcttccct	gtgttttctc	tgcatgtctg	tgtctcttct	ttctcttaaa	aaaagacacc	9840
aggcatttga	tttagggccc	accctaattg	agtgtgtcct	catcttatct	atttaaagct	9900
gtaaacacct	tatttcctaa	gaaagtcgta	ttttgagggt	ctggatgaac	atgaattttg	9960
gggcattaat	gttcgtatgt	taaacctagc	attcccggga	taaactctgg	ttagtcatgg	10020
tgtgatattt	tattgtggga	tgtgatttgt	taaaattgtg	ttagggttg	catctatatt	10080
tatgaagtct	attgggtctgt	aatttttttc	ttataatgtt	accatcaggc	ttgggtatca	10140
aatgagttgg	ggagtgtctt	ttcttcattt	tataaaagtt	tggtatcatt	attttcttaa	10200
atgagaggat	tcaccagtac	aattatctgg	gcctggaatt	ttctgtgtgg	agacatcttt	10260
ggcattacat	ttgatttttt	aaataggtat	ttcagtactc	acattttctg	ttttgccagt	10320
ttggtaattg	tgtctatcaa	gaagtttgtc	catttcatct	gatagtgtga	gtttataaac	10380
agagtgtgtc	acgatagtcc	ctcattcttt	tgatgactag	gattatcatg	acatttccatt	10440
tttatttcta	acatatataa	tttgtgtttt	gtgtctttcg	tgctaaatct	tgataggcat	10500
tgcttagttt	tattaaacgt	ttttaagaac	cacttcggct	ttgtcatatg	ttggtgcaaa	10560
agtaatttga	gttttggcca	ttactttcaa	tgacaaaaac	cgcaatcatt	ttgcaccaac	10620
ctaataattt	tctctattgt	ttgtttaatt	gattttcagt	attatttcag	tattattcag	10680
tattatttct	tttactttct	tttttttttt	ttgagacaga	gtctcgttct	atcgcccagg	10740
ctggagtgtc	gtgggtgcaat	cccagctcac	tgcaagctct	gcctcccagg	ttcactccat	10800
tctcctgctt	cagcctcccg	agtagctggg	actacaggca	cccaccacca	tgcttggtca	10860
atttttgtat	tttttagtag	gacgggggtt	caccgcgtta	gccaggatgg	tctcgatctc	10920
ctgacatcgt	gatccaccca	cctcgccctc	ccaagggtgt	gggattacag	gcgtgagcca	10980
cggcgcctgg	cctcttttac	tttcttttgg	tttaatttgc	ttatctttag	atttgaaaat	11040
tttctcattc	atttttaaga	tttctgtgat	ttctgtctaa	cctgttgaaa	gggtgaaact	11100
ttcttctttg	tactgtttta	gtggccccga	ttttttgatg	ccttttatatt	ttattatcat	11160
ttctttaaat	atataatttt	acttcccttg	tgatctcctg	ttttaaaaat	ttattttttt	11220
agttgaaaaa	taataattgt	acatggggta	catagtgtat	tttcgataca	tataatatat	11280
agtgatcatt	gtgatctctt	tttggaccag	ttgggtattt	tatgggtgatt	tattttattt	11340
tcaaataact	gttttttctc	tagatatact	tttgatgtta	attataagtt	aattttgttg	11400
tagtctagag	aatgtatctt	acatgatttc	aaatttttaa	aaattattat	tattatttct	11460

aaatggccca	gcttttagtgt	atcttgtgaa	agtctcattt	gcacctgcaa	agtagatgtg	11520
ttctccaggt	gttgaatata	atgttgtata	atttaagttt	ggccaacatg	gttggtaata	11580
tcattcagat	cttctttatc	cttactgatt	tttcatccaa	tttgtttacc	cgttaccaac	11640
ttaggggtat	taaaatatcc	agttatgttt	gtgggtttgt	ttatacttct	ctttagttct	11700
gtcagtattt	tataactttg	ttatcaggca	catacacatt	tattattatt	atgttttgag	11760
cattatgaaa	cgtctctacc	tctggtaata	ttcctttcct	tatcttatag	attgttttgt	11820
gtaatacttc	agctttctta	tgacaagtgt	ttccatggta	tatgctttct	atcttttttc	11880
tttcaaacta	attctgtctt	ttcatgtaag	tgaatctctt	acaataagag	tttgggtgca	11940
cttttttatt	aagtctgaca	atctatgcct	tttaatgtag	tgtttagtcc	atztatgaat	12000
gttttgtcca	tttaatgtaa	atactgctat	gattggattt	aggagcaatt	tgttgctctt	12060
tatttttctat	ttatctgttt	tttaaaatta	ttgtttttat	tgttgtttct	ctgttactcc	12120
tttcttgcct	ttttttgagg	agataatcat	gaatctttta	gttttttatt	attattgacc	12180
ttttatctat	atttgtttgc	attgtatttc	tcagagttga	tcagtggatt	acagaatata	12240
tctgaaaatt	atcacaaatc	atttagaatt	gatattgtat	tgtttcacat	ttgatctaga	12300
aaccttggaa	taatatagtt	ccatatactc	cctcatccat	tgtagctattg	tcatatatta	12360
tatctacata	tcctataatc	cccacaatag	agttataact	ttttcttaaa	gagccctttc	12420
agttttttgt	attagacttt	taaaaaatta	aagaaggcta	gaataaatat	atattatata	12480
tctactgtat	tatatattgt	atatattata	gataacattc	tattgctaaa	tatagataat	12540
atatatttgt	agacaatatc	tatatatagg	taatatatat	tctattctta	tatattatat	12600
agatatataa	catctatata	atctatttat	agatattaca	tatctataaa	tacatatata	12660
atttctaggg	atcttcattt	cttctgttag	attcagatta	ccattttgtg	tcctgtcagt	12720
cttacaact	tattttacat	ttcttgtaat	acaggtttac	tagtgatgga	tttttctcag	12780
tctttgcttt	tctaaaagta	tttgtctcat	ctttgttttc	aaatgggtgt	tgatgtgatt	12840
gtattcttct	tgtctaacag	ttgccttctt	ctacctccag	ctctttatag	gtttccattt	12900
ttattggcct	ctcttgtaat	cattcatttc	attgtcctct	ctatataatg	tgttgatttt	12960
gtctgaatgc	tgtcaggaat	tttactcaag	attgtggttt	ttatcttttg	attacagcaa	13020
tttgactgca	tggtgcctgg	gtctagcttt	ctttatgttt	attctgcttg	acgtttgttg	13080
agctttccaa	acctataagc	tgatactgtc	tgtgaaatgg	gaagattggt	atttcccacc	13140
ctatttttca	tcctctcctt	ttggtagtgt	agttacacat	gcattgaaat	ttgtgctata	13200
tctcactgat	ctctgagatt	ctgtttatat	ttcttaaata	ttttttctct	ttgtttttta	13260
agattgaata	actttgtatta	cttagtcttc	acgtttacag	attgtgggtcc	ggagaatgta	13320
tcttttatga	tttcaaatg	tattaaatta	ttttgttttg	ttttaatggc	ccagcaaaag	13380
ggtagtgcgt	gagagttcca	tttgtagttg	caaagtatgt	gtgttttcca	ggtagaattt	13440
ttatttcaact	tattgtgggtg	ttcaacttca	gattttctat	tggtattttt	tctgtttttt	13500
aatataaaaat	ccccatctt	ttcagccatc	atgcatatat	tttccccaaa	gtgcttgaac	13560
atattttatat	tagctatttt	aaagtccttg	tctgctaact	ctaaaacgtg	agtcactctt	13620
gggttgggtc	ctattgacca	ttctctgttt	tttttttttg	tttttttaaa	aagtgtcacc	13680
attttctgtt	tcttttagtga	cttttgattg	aataccgggt	gttctgaatg	atatttttga	13740
gagattctgt	attcttttat	gtcccttcaa	acataatttt	tagcaagtgg	atatcatggc	13800
tggacacaaa	ttcccaatcc	tgtttctcct	gcagtggata	tcagctgaaa	tttctgctta	13860
attcttttca	gtttctagct	tctatgcttt	tacaggatcc	tctgaggtct	cccttatgcc	13920
acaaatagag	gtggtaaagg	tttttgggtga	atttcatatg	cagattttgt	ggtcactgtc	13980
ctctgctatt	ttccacatac	ttattggctg	atctgatggg	cctagactca	gtcccctgtt	14040
ccctcaagtc	attccacca	ggctgtagcc	ttctattact	tgagctgcat	agactggaga	14100
atgccttctg	gcaaaaagct	actaatttgc	agatctcctc	aggtgaagct	ttatctttca	14160
gggtagactc	cagtgtctca	gcacttcttc	cattttctca	aatgttttct	ctccattgct	14220
tttgacatat	aatttctctt	gcaccataaa	aatactgcgg	agaaagaaaa	ttaaagtatt	14280
tgtacaacaa	agttgaactt	cctacattgt	aataatcatta	cctttagggt	agatgattct	14340
atgaagaaat	gtttacctta	gatagacaaa	tataattatt	tcatatcaga	tagaattttc	14400
agaattttga	ggaaaactca	agtgcattga	atctatgtgc	ttttcctatc	taaaatattt	14460
ggaagttagcg	gcttacttga	ttttattaaa	tgctttcatt	tggataacta	gtaatatattg	14520
cttggaaacta	aagtatttta	cctgtcttct	ttatgctttc	cttcaaagga	taattgtagg	14580
aagagctatc	aaaatcaaat	cttggcctta	aatatttata	agaaatgtga	ttattaagta	14640
ataggagttt	tgaattttgg	taaaaaataa	atagagaggt	gggtggtagtt	aaagaacttg	14700
aataactctt	tcagtgaacc	cttttaaatg	ccaagacatc	aaggcttgaa	agtaaagcat	14760
gcttacctcc	attggcttgt	cacactttgc	gtttcagcaa	caaattgccta	aataatgcag	14820
atttcagagt	tatgcactat	ttcaatttgt	agttttaata	atgctattgt	tcccataaat	14880
gttaattatt	aaacttatgt	ggcaaatgta	tttttttttg	cgaaaacagg	attcatgctt	14940

aacaagtcta	gcatcatcat	cacttaaaca	aattcttggg	gattcttttt	caccaggatc	15000
tgagggaaac	gcatctggaa	aaggtgggta	tatctaataa	ttatatctta	tatgtgaact	15060
ctgtactact	tagactcctg	tttgtaagag	aaataatact	ttgtatagtt	ataagagaaa	15120
tatatgtttt	tatgtgtttg	agttttaatc	ctgactatgt	agttaactaa	ctgtgatttt	15180
ggatgcagaa	cttaatctct	cagtgcctca	atttccctaa	gttatattat	ttgtctcata	15240
aggttattgt	gaaaattaa	tgatatagtg	catttttagcc	attagcctag	ttaatagccc	15300
aagtggagtg	agcacttaag	gtaaactact	gttatgtatg	tgttgctgtg	atattctgca	15360
ggacaacata	atagctaggt	ggaattttta	agtggagacta	agctagattc	caatacaggc	15420
acaattacat	aagcaaagta	actaaccttt	ctgaccctgt	atgttgatct	ttaaaatggg	15480
taaaataaga	gtaatttgcc	ttatagggtg	ttgtaagaat	taaacatgta	aagcattttac	15540
agcaatacca	tagtaagcac	ttgggtgtgat	atgtgaattg	ttaacataat	ttcttttctt	15600
agtgatcgt	agcttaatga	aacctaaaag	acatagctat	ttctaggtct	gagatgtgta	15660
atgaacattt	tagtgcttac	tatgtagtat	catttttgtc	attttaacaga	tgagaaaagc	15720
tgaagtgcag	tgacttaggg	aaacataccc	aagggtcagtg	atggaaccat	agttaaatct	15780
tgagttccaa	agttcttgtt	cttttcactg	aacagattaa	cagctccaaa	gaatccaata	15840
gtgaattgag	tgatttttaag	cccatgttac	ctcaaaacaa	attccaaaaa	aatgggtcata	15900
atgaaaccaa	cagaattaa	acttttcaca	gtaaagattc	aggtttagct	gcaagggtgga	15960
cgttggtaga	actgaaagtt	gggtgatccca	ttccaaaatg	tggtaaaatc	agaatagtag	16020
aagcaattct	ataaatgcaa	aactgaatct	tcttttgcca	gagcttgagc	ctgtttcttg	16080
gagcactgag	aggataagca	ataggcttgt	ctttattgcc	ccttatggta	tcagaggaag	16140
tactacatct	tggtgagatg	aaactcacta	gagactgtgt	aaaattgcat	taattcttgg	16200
ttctttctgc	agctatacaa	ttcaacaatt	gtactactag	taactgtagt	agcctagaga	16260
gggtgtgacac	cttcttatgc	agcgtgttgt	tccagctaag	aaactcaggc	tttagagtta	16320
aacaaatatt	gtcatctcac	ttacttggtt	tgtatatcaa	caagctcttt	tgacatgtcg	16380
ttgttttagg	gtagttattc	cattctgttt	attaatatgc	tatttttcta	agtactagat	16440
ttgttaagtg	cttcattagt	taagcctaga	ctattttttt	ttgtaaatca	ctttcgaaaa	16500
gagtttatgc	aagttttaata	tgataacttt	tcttcatatt	ttgcaagaaa	aaagagttta	16560
tagatagtcc	tcattttaaaa	gaaagcaa	gaatcaagta	tttaccttat	taattcagaa	16620
ggggggtttta	atgctattac	tctgtctcaa	aatagatcca	aatgaagaaa	tcactgaaaa	16680
ccataattcc	ttgaaatcag	atgaaaataa	agagaattca	ttttcagcag	accatgtgac	16740
tactgcagtt	gagaaatcca	aggaaaagtc	agtgcactgt	gatgaccttg	aagaagaaaa	16800
ggcaaaaagcg	gaactgatta	tggatgatga	cagaacagtt	gatccactac	tatctaaatc	16860
tcagagtatc	ttaatatcta	ccagtgcac	agcatcttca	aagggtatttg	taaaaattca	16920
tacttttcat	actacagctt	aaaacttgaa	atagaacttt	aagaaatttt	atcttctgtg	16980
ttatatactt	ctgaattacc	agtggaaaat	ttatcttttg	atagtgatat	tgtattgtca	17040
catggttctt	acttaatcca	ataaaaattta	actttaagga	aagttttagt	tgaatataat	17100
gaaaccagtt	gtttaaaaat	tatcagaggt	gtgtgtgtgt	aatatacttt	taaatgtctc	17160
agaaatgcatt	actcatagt	tatatatttc	cataggtctt	catattttta	aaatataact	17220
gtctggaata	atctctgaga	ttttaaatta	gagttatgtt	tttggtatatt	gttttaaaac	17280
gtgttaacaa	ttttaacaaa	aatcttaaa	aaatgtttat	caacagttta	tcaacatctg	17340
tgcttcttta	aaatagatgg	ttatcatcag	gaacattagt	attattattc	gtatttgatc	17400
ctttgccttt	atcttcta	tttcaaaa	atgaactgg	gacctggcaa	cctccagagg	17460
tgatgaagtt	gctttgtttt	ttcttttttc	aattcatgta	aatttaattg	ttacaagtgc	17520
ttttttgtta	catggatata	ttgtgtagtg	gtaaaagtcag	acttttagta	taaaactaaa	17580
tgtacattgt	accatttaag	taattttctca	tcccgacact	ccctctcacc	tttcttagtc	17640
tccattatct	attattccat	accctatata	catgtgtaca	cattatttag	ctctgacttg	17700
taagtggagaa	catgtaccat	ttgactttct	gtttctgatt	tatttcaact	aaggtaatag	17760
cctccagttc	catccatggt	gtaaaagata	ttatttcttt	tctgtgtggc	tgaatagtat	17820
tctgtgtgtg	gtgtgtgtgt	gtgtgtgtgt	gtgtgtgtgt	atcacacatt	tctttatata	17880
atcatatgtt	gatgtacact	taggttgatt	ccatatcttt	gctattgtga	ctagtgggtg	17940
gataaacatg	agtgcaggta	tcttttttat	ataatgat	atcttctttt	tggcagatac	18000
tcacagtggtg	gttgctggat	tgagtggtag	ttctatattt	agttccttaa	gaaatcccca	18060
aactattttc	cataaagatt	gtactaattt	acattctttac	caagagtata	caagcattcc	18120
cttttctctg	tgttctcacc	aacatctgtt	acttttttaa	ctttttaata	atagctaaat	18180
attctgacta	gtataatata	tctcactgtg	gttttaattt	gtgtttctct	gatgattagt	18240
gatggtgaa	atgttttttc	atgtttcttg	gccacttgta	tgtcttcttt	tcaaaaagtc	18300
tattcatgtt	ttttgccttc	tttttagtgg	ggttatttgt	tttttgttgt	tgttgttgag	18360
gggaacatta	ttattataac	cttaagaaac	agatatgtaa	tatgtaggat	tacttgtccc	18420

tacattaaat	tgtgcctgag	tgctatactt	taaaaattta	tggtgtagca	ttttcagtc	18480
ttgtttctcc	tgaatttgtc	attatctctt	gtagctgcaa	ttagctagca	gctctgtgtg	18540
tttattatca	gcggaagaaa	acagggctag	ctgaaaattt	gtgtttgagc	aatactttta	18600
taacataaaa	tacaagcttt	tcttaaaatt	gatgaaggag	gttcattaag	ccatgttcca	18660
ggtatatcat	ccttagctaa	tttcttttagg	aaaaaaacac	tactgctaag	ttagggatgt	18720
gtttattatg	tctgtgctct	cactttacca	ctagcaccca	tcagtctgtg	taaagtagaa	18780
aagttgttcc	ttaaaagaag	aaaggatatt	ccggagttta	tagacaggat	tgtagaatgt	18840
ctaatagagg	caattctaaa	ttagaacagg	catttcatat	gtaacaagta	aggttgtaac	18900
ttgtttcttt	tgactggacc	cttggcctca	ttcttactct	ctactgaatg	accttttcta	18960
aacagaaata	taatcattct	ccattaaagt	ctttttgttg	gtttctcatc	acaagaattc	19020
catccagact	cctcatcgct	gcctagtgat	ctcacctggt	tcttccctga	ccacgtcttc	19080
ctccgctttc	cttgccattc	actatgcttc	agctccattc	acctctttct	gtttttcaga	19140
gataacaggt	tccgtccctt	ctcaggcttt	taccacttg	ctgtttcttt	ctttcataga	19200
cctttcgggtg	ggccctttgc	actcttagct	ctgatgtcag	cccctcagga	cagccttccc	19260
tgaccaactt	ctttaagca	gctcctcagc	cccactctag	tcattctctg	tcactgcaca	19320
ctattttatg	tccttcatga	gccatgtttg	cttatatatt	tatttttggt	catccgtctc	19380
tagaatttaa	tattcttaag	ggcattttat	tcactgattt	gctcccaatt	tctactgtgt	19440
ttgacacata	gtagatgctt	aaagaatagt	gatttactgg	cagtttggct	tctaagccta	19500
aaaaggatag	ttgtcatgaa	taaatcatct	ttggcatttt	ctgtttaata	gaaaacaatt	19560
gaagatagaa	atataaagaa	taaaaagtca	acaaataata	gagcatccag	tgcactgtcc	19620
aggtaataaa	gttaccaata	tttgtcattt	atgggcttgc	attctagcaa	agctagtttt	19680
aattttaactt	tcataaagta	aatttcattt	ggtgttactg	tattttcttt	ttatttccat	19740
ttcataaaaat	gaaagtagtt	aacttcatga	taaaaccctt	tggttgatga	tattatttga	19800
aataaagtaa	tttataaaaa	gtaagtctat	tactgattgt	tttagtgcct	ggaatgttta	19860
tgcaataacct	ttgctctcca	ggatcgctct	aggaatatatt	ttcttctttc	ttaatgtcag	19920
tgattagggga	ttctttgtgc	tccagactgc	ttctggaata	gagcttcttt	ctcctacttt	19980
tcctgagaca	agcaatataa	aatggtaata	aagctgaagt	ctagcaatga	tacttattca	20040
ttatcaagta	tcattgtcta	acatgagaaa	ttgtactgaa	agccttcaga	atctatgaac	20100
taagtagggt	tattaaaatg	attatctgta	tagcttcatt	cacaccaatg	ataatgaatg	20160
cctaactcat	aagtgtcaat	caaaaacctt	ctgaatcttt	aaaattatcg	ttagtcaaat	20220
tatcattaat	caaataaaac	agagctagca	agctttttct	gtaaatggcc	agttagtcca	20280
tatttttaggc	tttgtaggcg	atacagtctg	tattggaact	actcatttct	gctattttta	20340
caggaaagca	gccacaggca	aaacttaaca	tgaatgatta	cagctatggt	gcaataaact	20400
ttgtatatca	aaaccaatgg	ctggccaaat	tttcccacca	atccctgata	tagatagtac	20460
tattctttct	aattttatat	ttggaatgct	tcattgtaaca	aaatgatgaa	agaaaatat	20520
aaaagagtga	ttataaccta	ctgtattggt	ttttccatgt	aacttgagaa	gtggtcata	20580
tttcttaagt	ttctaattac	aaatatttta	aaagagcaat	catttttaaag	ctatataaact	20640
taaagttata	aaattttaat	tatgttgaag	gggacatatt	taagttatgt	ccccttctac	20700
ataattttaat	attcttttga	tactaagact	gtacatttta	cctacatcat	tttcaaagta	20760
attataattt	gttaaattat	aatgtagtgt	ccaatttttt	ttttgagatg	gagctctact	20820
ctgttgctca	ggctggaggt	cagtggcatg	atctctgctc	actgcaacct	ctgcctcctg	20880
ggctcaagct	atcctcccac	ctcagcctcc	agggtagcta	tgactacagg	catgtgccac	20940
cacgccagct	aattttttgt	attttttgta	gagacagggg	ttcaccatgt	tgcccaggct	21000
gggtcaacagc	ccaacaggat	gagctcaagt	catccaccca	ctttggcctt	ccaaagtgtc	21060
gggattacag	gtgtgagcca	tcatgcctgg	ccagttttca	aatattatac	gtgcataatt	21120
taacagatct	ctcttctacc	aaatgcaatt	gtaatatatt	gtcttgattc	atttggatct	21180
tttcagatta	atgacctctg	agtttttgaa	gaaatctagt	tctaaaagga	gaactccatc	21240
gacaactacc	tcttctcact	atttagggac	tttaaaaagtc	ttggaccaaa	aaccttcaca	21300
gaaacagagc	atagaacctg	atagagcaga	taacataaag	gcagctgttt	atcaggtaaa	21360
aaaggaaaaat	atttttaaga	gaagaagaat	gatcactttc	ataagcctac	actgtttata	21420
aagaataaag	taatcctgat	agaaaatgat	ggtttaatac	ttaaatttat	tgagaaagag	21480
tttcctttta	atacatgagt	aatcatattt	tactaaatta	tttgcttcca	cactttgcat	21540
aactgaccat	agttgttttt	aaagaaagaa	tatgccattg	caattttatag	aaatacagca	21600
caagccaaaa	cattgtaaaag	tctatatatg	ttttcatatt	tttcttcttg	aagtttatat	21660
gaacaaaagg	agttattatg	aacaaaaagt	tattaaattt	tttctttcct	gagatgttgt	21720
taggcgtaca	taggaaaaag	attgtattaa	tttattcaca	attctaaaag	tctttttttg	21780
tctttttttag	agtagaatag	tatactttag	aaaattgtac	atgtgaattt	cagagaaaaat	21840
gttaatatata	agaattctaa	ttcacttaag	aaatttttaa	tatttatatga	cctttttctt	21900

gttcttatag	gagtgggttag	aaaagaaaaa	tgtgtatttta	catgaaatgc	acagaataaaa	21960
aagaattgaa	agtgaaaact	taaggatcca	aaatgaacag	gtattctgac	atatagaagt	22020
aaaaatgttt	tggatttttta	tttcagtaaa	atatccctga	atatataact	tttctaatac	22080
agcttttttaa	atggcaaaaat	aacttgtata	ttaaagaaat	gatttccggt	tttacttctg	22140
ttttacttta	tacatttttag	tttgatataa	ctggtttaca	tgaaaacaga	ttttaatttt	22200
gtatatgtat	aggatagctt	tgttcctgct	gattatgaag	ttattattgt	ttatgagcac	22260
ctaattcact	tttaaaagtt	gatttccattt	agaacttaac	caagaaggcc	aggtactgtg	22320
gctcatgcct	gtaatcccag	cactttggga	ggccaaggca	gatgggattc	cttgagggtc	22380
ggagttcgac	accagcctgg	gcaatgtggt	gaaaccccat	ctctactaaa	aatacaaaaa	22440
ttagccaggg	atggtgggtg	gcacctgtaa	tcccagctac	tcaggaggct	gagggtggcag	22500
gatcacttga	accggggagg	cggagggtgc	agttagctga	gatcgtgcca	ctgtactcca	22560
gcctagggtga	cagagactct	gtctcaaaaa	aaaaaaaaaaa	ggcacgacaa	gataaaggat	22620
cattagacac	tagttagcct	tcaattttcc	tcttttctct	cttgaatttt	ataagtatct	22680
tcaagtccaa	cccctacctg	aactcttgat	ctgtatcctt	tcccattgaa	tggagggtgaa	22740
cttttgttcc	tgtctcttct	gtactgagtc	tcttcctcta	actcctgctt	gtaatacgct	22800
cagttatttc	ttatcttcta	aagtcaaact	tctggacaaa	aactccagtg	tgtctgttcaa	22860
tactaaaaat	agatttagaa	gaaaaatatt	ttccaagggtg	aactgcacga	taatgcgtca	22920
gtagtgaagg	gagcagccct	ccagggggcg	tgcctgtcta	tctgttaacc	acgttcatag	22980
cagtatgctg	ctgtgggtcag	tgccataccc	tctctcattt	gattttcgtg	gctctgtgag	23040
gtagatagta	ctttgacctc	taaattatgt	taccccaata	ttaagggtttt	atgtcatttta	23100
atattgaaca	ataaagcaaa	catagaatat	tatgggatta	gattgaagga	agtaaaataa	23160
taacataact	tgctatacac	tctccaacct	atttttcagt	cgagcacata	ctttcaacat	23220
ttggaataca	tttgtgcagt	aagaacttta	tgttttgata	ctattcaaaa	ttaagatttta	23280
aacaaaaaat	ctgcacttta	ctgcatggct	tgcccaattt	gccttactct	aacttacttt	23340
ataagcccat	aactttactg	attttttttt	caaatatattt	attatgaaaa	ttttactata	23400
ccacttagcc	tattacagtt	tattttgata	taatttgttt	agtacacttt	caaaaataat	23460
agttgacatc	tttctcatta	ataggtcaat	atgtgataaa	tgtttttaga	aaaggacggt	23520
ttaaaacca	tgaataattc	agataacatt	ctttgtaaat	tatctaagcc	attctaataa	23580
aattacctac	tttgaaagtt	aattttctaag	tataatgaat	atcagaggac	taaagataaa	23640
tgtatatgtg	tatatattata	tctagccata	tttgtgtcta	tgtatatata	catatatatg	23700
tatatcactc	tattattttt	tccactgtag	aaaaaagctg	ctaaaagaga	agaagcatta	23760
gcatcatttg	aggcctggaa	ggctatgaaa	gaaaaggaag	caaagaaaat	agctgccaaa	23820
aagaggcttg	aagaaaaaaa	caagaagaaa	actgaagaag	aaaatgctgc	aagaaaagga	23880
gaagcactac	aagtattcag	aactttgcac	atcttaatta	ttttaaaaca	tttgaaatcc	23940
aaattaatga	ttaaccatat	ttttattttat	tttcaaatat	tcacagtaag	aaaattattc	24000
tgaacttttt	caggcttttg	aaaaatggaa	agagaaaaag	atggaatatc	ttaaagagaa	24060
aaatagaaag	agagagaat	atgaaagagc	aaagaaacag	aaagaggagg	aaactgttgc	24120
cgagaaaaag	aaagataatt	taactgctgt	tgagaaatgg	taatccaaaa	tcataaatat	24180
tttgatata	tttaaattat	agtaacactt	caggatttta	taaaatttat	ttacttgaaa	24240
tttagtaatg	catttcaatt	tcattactgt	caaagatgta	ctagggaatc	tttattatgt	24300
attttccttt	aactctccag	tgtttttatac	tatgctctat	aggaatgaaa	aaaaggaagc	24360
ttttttcaag	caaaaggaaa	aagaaaaaat	aaatgagaaa	agaaaggaag	aactgaaaag	24420
agctgagaaa	aaagataaag	ataaacaagc	tattaatgaa	tatgaaaaat	ggctggtagg	24480
tattatttgt	caatgcactt	tctgtttttt	catgtacctt	ttgtgtcttt	tctgtcccta	24540
attctaattc	tatttgctcc	agacctactg	atcatttcta	cctggaatct	gctttgttga	24600
attcaagctc	tectcctgca	tatagcatat	tttctttgac	ttagtcattt	ctattaatgt	24660
ttctactatt	ccctcaaaca	cccaggctga	aaacttggtt	taatcttctt	ccttacctgc	24720
atccccacat	ttaccattta	ctattcatgc	ccattcttcc	tttgctgtga	ttctcacatc	24780
taacatagaa	agaagacaag	tttactattg	agggtactac	gtgggtggaac	ttggtcatga	24840
caaaaagtaa	cactgaactt	aatagtgaga	aaattattcc	atctttttat	ctcttttgat	24900
gtttctgatg	acctcaagga	gaatctctta	tttaggaatt	tttaatgaaa	gagagcagg	24960
ttgaggttta	ggaggagcaa	tagctagctg	aaccagatat	gtgtatatat	ttgatttcac	25020
tttacttatc	tttataaaaag	ttactttttg	ttgatgtcaa	gcaaaatatt	attttccatt	25080
ttagaatata	aataataaata	tgcattttgt	ccatgtttat	ataagtaata	cattactatg	25140
aataaatact	ttacataagt	aggtaacaca	ttcatatgaa	tagttaacat	attcatatga	25200
ttcagcaacc	aaaatttatag	tatttttgca	ctagaagtct	atccagtcag	gtttcctatc	25260
aaactttaaa	acaactcata	ccaatcaact	aaatcatcca	gggtgttttt	gatttgcatt	25320
tctctgggtta	gaattgagct	tgaatatctt	ttcatttgta	tacaggccat	ttatctatta	25380

ttttctctgt	aaattgtcat	ttcatagact	ttgcacactt	ttctattaga	ttgttggttt	25440
tttttcctta	ctggtttcta	gaatcttttg	ttttgtactg	gggaaattag	cctatcattt	25500
tttatatggg	ttgcaaatat	ttacccccac	tatatgtttg	gtttcccggc	tttccttata	25560
gtatctcatg	ccatgaagaa	tttaaatttt	aggtgtcaga	tttctgtttt	tttttttttg	25620
cttttgattt	tcaagcatag	ttgaaaagac	ctacacaatt	tgagattaaa	cagaattatc	25680
ttatTTTTct	tctaacaact	ttgtgacttt	aatatcttaa	tgttttaaca	tttgttctgc	25740
ttggaatttg	ccctgataca	tgggtgggaaa	tatgatttca	acttttagtt	ttccaaatgt	25800
atcctttata	aagtagccca	tttttaccce	ttgatttgag	gtgctacttc	tgttatatga	25860
taccttctca	tgttttcggg	tctgtttctt	aactttctgt	tccattgggtc	agtctcgtga	25920
ttccagtgcc	acacttccat	tattaggcct	gatatgtcta	aatatctgct	tggattcatc	25980
tccctttata	gttcttcttt	cacagtcttt	ctgaccagtc	ttgtttattt	attttttcca	26040
taaaccttaag	aatcagcagt	agttagaaag	gtacatggga	ccaaatgag	cgatttaaag	26100
ataggataaaa	aagataaaac	aataataaac	ttaagaaaca	tgccagacca	acataaagaa	26160
aattgtagaa	ctctcctgaa	caacacaaat	gaagacttga	gaaaatggat	cagaattgcc	26220
catgcacaga	aacacactta	accttataat	gatgttataa	ggatgtcagc	tctccctgaa	26280
gtcattttaat	gcaatcttaa	caaaagccaa	caggatttac	tctgtgtgtt	gagtttagta	26340
ctgctatatg	ctaattcgat	gcagagaaat	agtaataaaa	taaggtaatc	aaaattgggt	26400
caattttgaa	tgaaaaaggt	agtgtttcat	gatgttttcc	ttaagttaat	ctgttaaata	26460
atgctatggt	ctaaaaaaaa	atttaaagtc	cacttatatt	aagaagatgt	acactgactg	26520
ctagtatcaa	ttagggaaat	taaatgtaaa	catttgagtt	ttccatttta	attccatatc	26580
ttcatgaaaa	tggaatagaa	tttctttaat	aagtcacatt	taggtatact	gtttttaatt	26640
atagcactta	attacattgt	cattcttatc	agtcctctga	agaacaagaa	ttcctcaaag	26700
accaaagaca	aaataacatg	tttgatatct	agtaaaatgt	ctgcaaatat	agtacaccta	26760
taaacacata	aacatacatg	ttacagatcg	gttctccttc	ttaccaaatt	cttattgaaa	26820
tttgtttgca	gatagaatag	aaaaattgccc	cctgtatagg	agtctaataa	cttcagtttt	26880
catggaaaaac	aacatctcaa	gctttttata	tacaaactag	tttgaacagt	aagcatttgg	26940
tgggttaattg	cttttagggga	aagttaatag	ccaaagatca	ggtaagacta	aaatatTTTT	27000
cttgccaatt	accagattaa	ttcatcatta	ccttttagtaa	gaaaataagc	aaaaagctca	27060
gtttttccaca	aataaatgtc	tgaaggactt	tttaacaagg	ttcttttaat	tactatcaag	27120
gtgactattg	attcttttga	actgatatta	cagttaatat	aattgtctat	ttgtaccctt	27180
ggctttacag	ctccctgcta	gtaagatgaa	gcataattca	agttactgcc	ccctcatgtt	27240
aagtgaaaat	acaaaaagag	atttattcag	tcaattttctg	tggacacagt	ctggctactg	27300
cttttcttcc	gcctagctag	atggctctgc	tctaaaatat	taaaatgatt	gaagatgatc	27360
taattacagc	tttgcttttcc	tcaattaaaa	ttctgaaaagg	aagtttcctc	tttgcccttat	27420
tagaaaatagc	aagcaaacaa	acatgcaagc	attcttatga	catggaatga	ggatatgggt	27480
gttaacattg	acaaaaaaca	aacaaacctc	ccacttcaat	ttgtttgtta	catgtgaatg	27540
gaaagcttgt	cctgtattgc	catattattc	ttgtggcatt	tatatatata	ctgatgaaaa	27600
gatgcataca	tacctaatac	ttttccataa	tgcttttctc	cccaagccat	caacctgcag	27660
aggcaggttt	cactaagggg	tttctgtctc	cttgaggaat	atgagaaaaa	taccaagatg	27720
aagaaaccac	caaaccttat	agtgttagca	gagacataaa	gggacacctg	gtgccccctc	27780
tccatttctt	gtctcctgcc	ttctgccaag	ccttagtcac	aatggatatt	tttgtttctc	27840
cccacagcac	acattttttt	tcccactctc	agagccctca	ccactactgt	ttgcaagcaa	27900
agctcttccc	cgatatattt	cacgagtggc	ttctcttatc	catcatgtca	cacttcaaag	27960
ggactttccc	tgagtccatt	ttttgttgaa	agtaataact	cttttttatt	ccttctcata	28020
gttttaaaac	atgtttcaga	gaaattcaca	caatttgga	ttatctgttg	tttattttct	28080
ttgtttctgt	ccattttgaa	agttccctgg	gggacaggga	ccatatctgt	gtgttgggat	28140
tttaaaaaat	tattttttatt	tgcaaatgac	acataaaaag	tgcacatatt	tatggaatac	28200
agtgtgatgt	ttccatctac	attgtataca	ttgtgtaaca	atcagaaatg	actcacaag	28260
gtaggcaaaa	tgtttgatgc	aaagatatca	ttaattttta	ttataggaaa	gtacacaaat	28320
tactaaaaat	taaaggcaaa	taccatacat	ttaaatgggc	caaataattg	agcagaaaaat	28380
ttacaaaagg	ctaaagaaat	gtttgaaaaat	gtgctcaagt	tcaataataa	agaaacatga	28440
ggcagaattt	ttaactattt	gtaaaaaatt	tgaagtatct	catactgtca	tgacatattg	28500
aaactttgca	cccagtaaac	ttacttctga	gaatttgttc	tcacgaagtc	accaccaact	28560
tataacagtt	actatatattg	agttataaatt	ataggtcttt	ttttctattt	tatacaattc	28620
ttttttaatg	ttttcacttt	taaagtttaa	aaaatttaagt	gatattagta	cttgcaaat	28680
gacaatgttt	actaattttt	ttcttgtttc	cattttttgt	ttgtttgttt	ttttgagaca	28740
gggtctcact	ctgttgccca	ggctggagtg	cagtgggtgca	atctcggtc	actgcaacct	28800
ccacctccca	ggctcaagca	atcctcccat	ctcagcctcc	taagtaggtg	ggactatagg	28860


```

catgcaccgc cacacctggc taatttttgt gttgttttgt agagatgatg tttcaccatg 28920
tttcccaggc tggctctcgaa ctcccaggct caaacaatcc acccacctta gtctcctaaa 28980
gttctgggat tactggcatg agccaccatg cctggcccta cctgttattt ctttatgatc 29040
tgttaaacta ggaagtgata tataaatatc ctataatgga ttattttgtt cttcagcaag 29100
caacctgatt tgaataaat aatcatatat gtacataaat ttatagtgtt ctattttctc 29160
tttaggaaaa taaggaaaaa caagaaagaa ttgaacgaaa acagaagaaa cgtcattcct 29220
ttcttgaaag tgaggcactt cctccgtgga gccctccaag cagaactgtg ttcgcaaaag 29280
tgttttgata attctagttc ttacattatt tggttattta tcggtttgcc aatattagcc 29340
atagatttaa aaccattcaa ttatttatag ttagagggaat atattttaat taaatgccag 29400
acactcctgc tgacaatgaa agaaataact tggaatgtaa tcagtgaaag catttttttg 29460
aactgtagat aaactgcctc aaacaaagac ctaataatca gattgtttt accattaaga 29520
tacataagat tttatcatgt cctgataatt cttatgggtg agtgattcat gatcttttct 29580
attaagctct gtatgttatt taagtatat taattccagt aataaaaagg aaatcatcta 29640
ggtaccataa tgatagaaat tattcctttt gtggatgatt gtgaatctag attcagggtt 29700
ttaaataaag ggtcgctggg aagtgcgcac atattattcc ttctgaaact 29750

```

```

<210> 17
<211> 200
<212> DNA
<213> Homo sapiens

```

```

<400> 17
acttccttcg tctgggtggt tgccccagcg acacgttggg ccgaagagcg gtgttgggta 60
cccgagagac ccggcggtgg ggaagtcact tcctcccgaa gacgctgttt cctagcaacc 120
gccctccgcc tctgttatta gccctcctc ctcgctcggt ccaggaccgg ctctgcgggc 180
gccgccaggc ccagaccaag                                200

```

```

<210> 18
<211> 139
<212> DNA
<213> Homo sapiens

```

```

<400> 18
ctactatcag aagttgaatt ctaataatta gctattttat aaaggtaacg agaaaaata 60
cactatgtct gatgaagttt ttagcaccac tttggcatat acaaagagtc caaaagttac 120
caaaagaact actttccag                                139

```

```

<210> 19
<211> 85
<212> DNA
<213> Homo sapiens

```

```

<400> 19
gatgagctaa taagagcaat tacagctcgc tcagccagac aaaggagtgc tgaataactca 60
gatgactttg acagtgatga gattg                                85

```

```

<210> 20
<211> 321
<212> DNA
<213> Homo sapiens

```

```

<400> 20
tttctttagg tgatttttct gacacttcag cagatgaaaa ttcagttaat aaaaaaatga 60
atgactttca tataatcagat gatgaagaaa agaatccttc aaaactattg tttttgaaaa 120

```

```

ccaataaatc aaacggtaac ataaccaaag atgagccagt gtgtgccatc aaaaatgaag 180
aggaaatggc acctgatggg tgtgaagaca ttgttgtaaa atctttctct gaatctcaaa 240
ataaggatga ggaatttgaa aaagacaaaa taaaaatgaa acctaaaccc agaattcttt 300
caattaaaag cacatcttca g                                     321

```

```

<210> 21
<211> 227
<212> DNA
<213> Homo sapiens

```

```

<400> 21
cagaaaacaa cagccttgac acagatgac actttaaac atcacctcgg ccaaggagta 60
tggtgaaaaa gaaaagtcac atggaggaga aggatggact agaagataaa gaaactgccc 120
tcagtgaaga attggagtta cattctgcac cttcttcct tccaacgccg aatggcatac 180
aattagaagc tgagaaaaaa gcattctctg aaaaccttga tcctgag                                     227

```

```

<210> 22
<211> 94
<212> DNA
<213> Homo sapiens

```

```

<400> 22
gattcatgct taacaagtct agcatcatca tcaactaaac aaattcttgg agattctttt 60
tcaccaggat ctgagggaaa cgcactctgga aaag                                     94

```

```

<210> 23
<211> 248
<212> DNA
<213> Homo sapiens

```

```

<400> 23
atccaaatga agaaatcact gaaaaccata attccttgaa atcagatgaa aataaagaga 60
attcattttc agcagaccat gtgactactg cagttgagaa atccaaggaa agtcaagtga 120
ctgctgatga ccttgaagaa gaaaaggcaa aagcggaaact gattatggat gatgacagaa 180
cagttgatcc actactatct aaatctcaga gtatcttaat atctaccagt gcaacagcat 240
cttcaaag                                     248

```

```

<210> 24
<211> 71
<212> DNA
<213> Homo sapiens

```

```

<400> 24
aaaacaattg aagatagaaa tataaagaat aaaaagtcaa caaataatag agcatccagt 60
gcatctgcca g                                     71

```

```

<210> 25
<211> 169
<212> DNA
<213> Homo sapiens

```

```

<400> 25
attaatgacc tctgagtttt tgaagaaatc tagttctaaa aggagaactc catcgacaac 60

```

```
tacctcttct cactatcttag ggacttttaa agtcttggac caaaacctt cacagaaaca 120
gagcatagaa cctgatagag cagataacat aagggcagct gtttatcag 169
```

```
<210> 26
<211> 90
<212> DNA
<213> Homo sapiens
```

```
<400> 26
gagtggtttag aaaagaaaaa tgtgtattta catgaaatgc acagaataaa agaattgaa 60
agtgaaaact taaggatcca aaatgaacag 90
```

```
<210> 27
<211> 160
<212> DNA
<213> Homo sapiens
```

```
<400> 27
aaaaaagctg ctaaaagaga agaagcatta gcatcatttg aggcctggaa ggctatgaaa 60
gaaaaggaag caaagaaaat agctgccaaa aagaggcttg aagaaaaaaa caagaagaaa 120
actgaagaag aaaatgctgc aagaaaagga gaagcactac 160
```

```
<210> 28
<211> 146
<212> DNA
<213> Homo sapiens
```

```
<400> 28
gcttttgaaa aatggaaaga gaaaaagatg gaatatctta aagagaaaaa tagaaaggag 60
agagaatatg aaagagcaaa gaaacagaaa gaggaggaaa ctgttgccga gaaaaagaaa 120
gataatttaa ctgctgttga gaaatg 146
```

```
<210> 29
<211> 133
<212> DNA
<213> Homo sapiens
```

```
<400> 29
gaatgaaaaa aaggaagctt ttttcaagca aaaggaaaaa gaaaaaataa atgagaaaag 60
aaaggaagaa ctgaaaagag ctgagaaaaa agataaagat aaacaagcta ttaatgaata 120
tgaaaaatgg ctg 133
```

```
<210> 30
<211> 485
<212> DNA
<213> Homo sapiens
```

```
<400> 30
gaaaataagg aaaaacaaga aagaattgaa cgaaaacaga agaaacgtca ttcctttctt 60
gaaagtgagg cacttcctcc gtggagccct ccaagcagaa ctgtgttcgc aaaagtgttt 120
tgataattct agttcttaca ttatttggtt atttatcggt ttgccaatat tagccataga 180
tttaaaacca ttcaattatt tatagttaga ggaatatatt ttaattaaat gccagacact 240
cctgctgaca atgaaagaaa tactttggaa tgtaatcagt gaaagcattt ttttgaactg 300
```

tagataaact gcctcaaaca aagacctaataat aatcagattg tttttaccat taagatacat 360
aagattttat catgtcctga taattcttat ggtggagtga ttcattgatct ttttcattaa 420
gctctgtatg ttatttaagt atatttaatt ccagtaataa aaaggaaatc atctaggtag 480
cataa 485

<210> 31

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 31

atgtctgatg aagtttttag cacc 24

<210> 32

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 32

aggcctcaaa tgatgctaata gc 22

<210> 33

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 33

atcatttgag gcctggaagg c 21

<210> 34

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
primer

<400> 34

aaacactttt gcgaacacag ttc 23

<210> 35
<211> 21
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 35
acaacgaata acagagtgtc c

21

<210> 36
<211> 20
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 36
actcctgata aacagctgcc

20

<210> 37
<211> 29
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 37
gccaccatgt ctgatgaagt ttttagcac

29

<210> 38
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Synthetic
primer

<400> 38
gaaacacttt tgcgaacaca gttc

24

<210> 39
<211> 26
<212> DNA
<213> Artificial Sequence

<220>
 <223> Description of Artificial Sequence: Synthetic primer

 <400> 39
 taatgtctga tgaagttttt agcacc 26

 <210> 40
 <211> 26
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic primer

 <400> 40
 tcaaaacact tttgcgaaca cagttc 26

 <210> 41
 <211> 25
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic primer

 <400> 41
 aatgtctgat gaagttttta gcacc 25

 <210> 42
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic primer

 <400> 42
 tcagcttgcc gtaggtggc 19

 <210> 43
 <211> 19
 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic primer

 <400> 43
 atggtcctgc tggagtctcg 19

```
<210> 44
<211> 391
<212> DNA
<213> Mus musculus
```

<400> 44						
aaagaagtga	agacagaaac	acgaagaata	aaaagacaac	gaataacaga	gtgtccagtg	60
cctctggcag	gctgatgacc	tctgagtttt	taaagagatc	cgggtcccaca	aaaagaagtc	120
catctgcagc	tacctcctca	cactattttag	ggagtttgaa	agtcttggac	cagaagcaac	180
cacggaagca	gagcctagag	ccagacaagg	ctgatcacat	aagggcagct	gtttatcagg	240
agtgggttaga	aaagaaaaat	gtgtattttac	atgaaatgca	cagaataaaa	agaattgaaa	300
gcgaaaaactt	gaggatccaa	aatgaacaga	aaaaagctgc	taagagagag	gaagccctgg	360
catcttttqa	qqcctggaag	qcaatgaaag	a			391

```
<210> 45
<211> 2767
<212> DNA
<213> Mus musculus
```

```
<220>
<221> CDS
<222> (204) .. (2147)
```

<400>	45																	
gttgggtacc	caagagacca	ggcgggttgga	agtcacttcc	tcccggggac	gctgttgct	60												
agcaaccgcc	ttctgcctcc	atcttttgcc	ccgcctccag	gttattccaa	tacctgggtt	120												
cccagaccgc	gaggcccggg	ccggggggcga	cacctgtgct	agagcatagc	cgctggggttc	180												
tcagcagaga	aaaaggacac	acc	atg	tcc	gat	gaa	atc	ttc	agc	aca	act	ttg	233					
			Met	Ser	Asp	Glu	Ile	Phe	Ser	Thr	Thr	Leu						
			1					5				10						
gcg	tac	acc	aag	agt	cca	aag	gct	acc	aag	aga	act	tcc	ttt	cag	gat	281		
Ala	Tyr	Thr	Lys	Ser	Pro	Lys	Ala	Thr	Lys	Arg	Thr	Ser	Phe	Gln	Asp			
			15						20					25				
gag	ctg	atc	aga	gcc	att	aca	gcc	cgg	tca	gcc	agg	cag	aga	agt	tcc	329		
Glu	Leu	Ile	Arg	Ala	Ile	Thr	Ala	Arg	Ser	Ala	Arg	Gln	Arg	Ser	Ser			
			30					35					40					
gaa	tac	tcc	gat	gac	ttt	gac	agt	gac	gag	att	gtt	tct	tta	ggg	gaa	377		
Glu	Tyr	Ser	Asp	Asp	Phe	Asp	Ser	Asp	Glu	Ile	Val	Ser	Leu	Gly	Glu			
		45					50					55						
ttt	tca	gat	acc	tcg	aca	gat	gaa	agt	cta	gtt	aga	aaa	aag	atg	aat	425		
Phe	Ser	Asp	Thr	Ser	Thr	Asp	Glu	Ser	Leu	Val	Arg	Lys	Lys	Met	Asn			
	60					65					70							
gat	ttt	cat	ata	tcc	gac	gat	gag	gaa	aaa	aat	tct	cca	aga	ctg	tct	473		
Asp	Phe	His	Ile	Ser	Asp	Asp	Glu	Glu	Lys	Asn	Ser	Pro	Arg	Leu	Ser			
75					80					85					90			

ttt ttg aaa acc aag aaa gta aac agg gca ata tcc aac gat gct ctg	521
Phe Leu Lys Thr Lys Lys Val Asn Arg Ala Ile Ser Asn Asp Ala Leu	
95 100 105	
gac tcc agc act ccg ggc agc gaa ggc tcg tca ccg gat gct caa gaa	569
Asp Ser Ser Thr Pro Gly Ser Glu Gly Ser Ser Pro Asp Ala Gln Glu	
110 115 120	
gat gtg act gga gat tcc ctc ccc aaa tct caa aat gat gat cga gaa	617
Asp Val Thr Gly Asp Ser Leu Pro Lys Ser Gln Asn Asp Asp Arg Glu	
125 130 135	
gtc ggc aga gag atc atc aca gtg aag cct aca ccc agg atg cac ccc	665
Val Gly Arg Glu Ile Ile Thr Val Lys Pro Thr Pro Arg Met His Pro	
140 145 150	
gtc aaa aga agc acg tcc tcg ggg gaa acc agc agc ggt ctt gat gca	713
Val Lys Arg Ser Thr Ser Ser Gly Glu Thr Ser Ser Gly Leu Asp Ala	
155 160 165 170	
gat ggc cac ttt aag cct tca ccc cag cca agg agc atg tta aaa aag	761
Asp Gly His Phe Lys Pro Ser Pro Gln Pro Arg Ser Met Leu Lys Lys	
175 180 185	
agc agc cac act gag gag gga gtc aga cca gga gtt gat aaa gaa cat	809
Ser Ser His Thr Glu Glu Gly Val Arg Pro Gly Val Asp Lys Glu His	
190 195 200	
tcc ata agc gaa gcc tct gct ccc aca cct tcc ctt cca agg cag aat	857
Ser Ile Ser Glu Ala Ser Ala Pro Thr Pro Ser Leu Pro Arg Gln Asn	
205 210 215	
ggc aca gag ttg caa act gag gaa aaa ata tac tcg gaa aac ctc gat	905
Gly Thr Glu Leu Gln Thr Glu Glu Lys Ile Tyr Ser Glu Asn Leu Asp	
220 225 230	
ctt gag gac tca ctc tta caa agt ctg acc tca tct tcc ttc aaa gaa	953
Leu Glu Asp Ser Leu Leu Gln Ser Leu Thr Ser Ser Ser Phe Lys Glu	
235 240 245 250	
agc ccc gga ggt tgc aca tca cca gga tct cag gaa aag gtg ccc ata	1001
Ser Pro Gly Gly Cys Thr Ser Pro Gly Ser Gln Glu Lys Val Pro Ile	
255 260 265	
aaa gat cat gat gga gaa cct act gaa atc tgg gat tcc ttg cta tca	1049
Lys Asp His Asp Gly Glu Pro Thr Glu Ile Trp Asp Ser Leu Leu Ser	
270 275 280	
aat gaa aat gaa gga agt tct gtt ttg gtg aac tgt gtt act cct gaa	1097
Asn Glu Asn Glu Gly Ser Ser Val Leu Val Asn Cys Val Thr Pro Glu	
285 290 295	
ctc gag cag ccc aag gac ggt cag gtg gca gct gac gac ctt gag gaa	1145
Leu Glu Gln Pro Lys Asp Gly Gln Val Ala Ala Asp Asp Leu Glu Glu	
300 305 310	

gaa aga gag aag ggt gga ttt aca gaa gat gac ctc acc act gac ccg Glu Arg Glu Lys Gly Gly Phe Thr Glu Asp Asp Leu Thr Thr Asp Pro 315 320 325 330	1193
ctg ctc tcc acg tcc ccg agt gtc ata aca ccc act gag cca gca gag Leu Leu Ser Thr Ser Pro Ser Val Ile Thr Pro Thr Glu Pro Ala Glu 335 340 345	1241
ccg gcc aag aaa gca aat gaa gac aga aac acg aag aat aaa aag aca Pro Ala Lys Lys Ala Asn Glu Asp Arg Asn Thr Lys Asn Lys Lys Thr 350 355 360	1289
acg aat aac aga gtg tcc agt gcc tct ggc agc agg ctg atg acc tct Thr Asn Asn Arg Val Ser Ser Ala Ser Gly Ser Arg Leu Met Thr Ser 365 370 375	1337
gag ttt tta aag aga tcc ggt ccc aca aaa aga agt cca tct gca gct Glu Phe Leu Lys Arg Ser Gly Pro Thr Lys Arg Ser Pro Ser Ala Ala 380 385 390	1385
acc tcc tca cac tat tta ggg agt ttg aaa gtc ttg gac cag aag caa Thr Ser Ser His Tyr Leu Gly Ser Leu Lys Val Leu Asp Gln Lys Gln 395 400 405 410	1433
cca cgg aag cag agc cta gag cca gac aag gct gat cac ata agg gca Pro Arg Lys Gln Ser Leu Glu Pro Asp Lys Ala Asp His Ile Arg Ala 415 420 425	1481
gct gtt tat cag gag tgg tta gaa aag aaa aat gtg tat tta cat gaa Ala Val Tyr Gln Glu Trp Leu Glu Lys Lys Asn Val Tyr Leu His Glu 430 435 440	1529
atg cac aga ata aaa aga att gaa agc gaa aac ttg agg atc caa aat Met His Arg Ile Lys Arg Ile Glu Ser Glu Asn Leu Arg Ile Gln Asn 445 450 455	1577
gaa cag aaa aaa gct gct aag aga gag gaa gcc ctg gca tca ttt gag Glu Gln Lys Lys Ala Ala Lys Arg Glu Glu Ala Leu Ala Ser Phe Glu 460 465 470	1625
gcc tgg aag gca atg aaa gag aag gaa gca aag aga ata gct gca aaa Ala Trp Lys Ala Met Lys Glu Lys Glu Ala Lys Arg Ile Ala Ala Lys 475 480 485 490	1673
aag agg ctg gag gaa aag aac aag aag aaa aca gaa gaa gaa aat gcc Lys Arg Leu Glu Glu Lys Asn Lys Lys Lys Thr Glu Glu Glu Asn Ala 495 500 505	1721
atg agg aaa ggc gag gcc ctg caa gca ttt gaa aaa tgg aaa gag aaa Met Arg Lys Gly Glu Ala Leu Gln Ala Phe Glu Lys Trp Lys Glu Lys 510 515 520	1769
aag cta gaa tac ctc aaa gag aag acc agg agg gag aaa gaa tat gaa Lys Leu Glu Tyr Leu Lys Glu Lys Thr Arg Arg Glu Lys Glu Tyr Glu 525 530 535	1817

```

aga gca aag aaa cag aaa gaa gag gaa gcg gtt gct gag aaa aag aaa 1865
Arg Ala Lys Lys Gln Lys Glu Glu Glu Ala Val Ala Glu Lys Lys Lys
540 545 550

gac agt tta act gct ttt gaa aaa tgg agt gag aga aag gaa gct ctc 1913
Asp Ser Leu Thr Ala Phe Glu Lys Trp Ser Glu Arg Lys Glu Ala Leu
555 560 565 570

ctc aag caa aag gag aag gag aaa ata aat gag aga aga aag gaa gag 1961
Leu Lys Gln Lys Glu Lys Glu Lys Ile Asn Glu Arg Arg Lys Glu Glu
575 580 585

ctg aag aga gcc gag aag aaa gac aaa gac aag caa gcc atc agt gaa 2009
Leu Lys Arg Ala Glu Lys Lys Asp Lys Asp Lys Gln Ala Ile Ser Glu
590 595 600

tac gaa aag tgg ctg gaa aag aaa gaa agg caa gaa aga att gaa cgg 2057
Tyr Glu Lys Trp Leu Glu Lys Lys Glu Arg Gln Glu Arg Ile Glu Arg
605 610 615

aaa cag aag aag cgc cac tcc ttc ctt gag agc gag aca cac cca cca 2105
Lys Gln Lys Lys Arg His Ser Phe Leu Glu Ser Glu Thr His Pro Pro
620 625 630

tgg agt cct ccg agc aga act gcg ccc tca aaa gta ttt tga 2147
Trp Ser Pro Pro Ser Arg Thr Ala Pro Ser Lys Val Phe
635 640 645

tgtttctggt tcttgatttt tttttcagtt caccaactgt actcatggat ttaaaacgag 2207

tcatctcatt atttgtgggt agaagactct atgtcacttc cctgcaggag cttctgtgga 2267

gcatgaaaga gatactttgc agtttaatca gtggaaacat tttctgaagt gtcctcatca 2327

gtttgctggg acaatccaga cgcatgaagc tttattatga cctgaacagt ctggtgtggg 2387

gtgattcgtg gtcactgtcg ctgagttcgg agtcttttta aagaatgttt gatcccacta 2447

atgaaagaat gccagctaga taccacaatc gtagagatga ctcggtctgt ggaagtctgt 2507

gcttctagag tgtagtttgg gcattgaagg tccctggaga ccatgggcat gttatctctt 2567

ctaactocag ttcttcaggt cacagaagta tctttgctgt gcaagttatc gactcagtca 2627

gttgaggcca cagaactcta gtcagtcact ttagtaaaga actttgccat aggggtttaat 2687

ctcggtgtgg tttgccttct tgaggcttac ctgacaatcg tagccacctc tataatgggc 2747

tcacttctgg aatgttcttt 2767

```

<210> 46

<211> 647

<212> PRT

<213> Mus musculus

<400> 46

```

Met Ser Asp Glu Ile Phe Ser Thr Thr Leu Ala Tyr Thr Lys Ser Pro
 1           5           10           15

Lys Ala Thr Lys Arg Thr Ser Phe Gln Asp Glu Leu Ile Arg Ala Ile
      20           25           30

Thr Ala Arg Ser Ala Arg Gln Arg Ser Ser Glu Tyr Ser Asp Asp Phe
      35           40           45

Asp Ser Asp Glu Ile Val Ser Leu Gly Glu Phe Ser Asp Thr Ser Thr
      50           55           60

Asp Glu Ser Leu Val Arg Lys Lys Met Asn Asp Phe His Ile Ser Asp
      65           70           75           80

Asp Glu Glu Lys Asn Ser Pro Arg Leu Ser Phe Leu Lys Thr Lys Lys
      85           90           95

Val Asn Arg Ala Ile Ser Asn Asp Ala Leu Asp Ser Ser Thr Pro Gly
      100           105           110

Ser Glu Gly Ser Ser Pro Asp Ala Gln Glu Asp Val Thr Gly Asp Ser
      115           120           125

Leu Pro Lys Ser Gln Asn Asp Asp Arg Glu Val Gly Arg Glu Ile Ile
      130           135           140

Thr Val Lys Pro Thr Pro Arg Met His Pro Val Lys Arg Ser Thr Ser
      145           150           155           160

Ser Gly Glu Thr Ser Ser Gly Leu Asp Ala Asp Gly His Phe Lys Pro
      165           170           175

Ser Pro Gln Pro Arg Ser Met Leu Lys Lys Ser Ser His Thr Glu Glu
      180           185           190

Gly Val Arg Pro Gly Val Asp Lys Glu His Ser Ile Ser Glu Ala Ser
      195           200           205

Ala Pro Thr Pro Ser Leu Pro Arg Gln Asn Gly Thr Glu Leu Gln Thr
      210           215           220

Glu Glu Lys Ile Tyr Ser Glu Asn Leu Asp Leu Glu Asp Ser Leu Leu
      225           230           235           240

Gln Ser Leu Thr Ser Ser Ser Phe Lys Glu Ser Pro Gly Gly Cys Thr
      245           250           255

Ser Pro Gly Ser Gln Glu Lys Val Pro Ile Lys Asp His Asp Gly Glu
      260           265           270

Pro Thr Glu Ile Trp Asp Ser Leu Leu Ser Asn Glu Asn Glu Gly Ser
      275           280           285

Ser Val Leu Val Asn Cys Val Thr Pro Glu Leu Glu Gln Pro Lys Asp
      290           295           300

```

Gly Gln Val Ala Ala Asp Asp Leu Glu Glu Glu Arg Glu Lys Gly Gly
 305 310 315 320
 Phe Thr Glu Asp Asp Leu Thr Thr Asp Pro Leu Leu Ser Thr Ser Pro
 325 330 335
 Ser Val Ile Thr Pro Thr Glu Pro Ala Glu Pro Ala Lys Lys Ala Asn
 340 345 350
 Glu Asp Arg Asn Thr Lys Asn Lys Lys Thr Thr Asn Asn Arg Val Ser
 355 360 365
 Ser Ala Ser Gly Ser Arg Leu Met Thr Ser Glu Phe Leu Lys Arg Ser
 370 375 380
 Gly Pro Thr Lys Arg Ser Pro Ser Ala Ala Thr Ser Ser His Tyr Leu
 385 390 395 400
 Gly Ser Leu Lys Val Leu Asp Gln Lys Gln Pro Arg Lys Gln Ser Leu
 405 410 415
 Glu Pro Asp Lys Ala Asp His Ile Arg Ala Ala Val Tyr Gln Glu Trp
 420 425 430
 Leu Glu Lys Lys Asn Val Tyr Leu His Glu Met His Arg Ile Lys Arg
 435 440 445
 Ile Glu Ser Glu Asn Leu Arg Ile Gln Asn Glu Gln Lys Lys Ala Ala
 450 455 460
 Lys Arg Glu Glu Ala Leu Ala Ser Phe Glu Ala Trp Lys Ala Met Lys
 465 470 475 480
 Glu Lys Glu Ala Lys Arg Ile Ala Ala Lys Lys Arg Leu Glu Glu Lys
 485 490 495
 Asn Lys Lys Lys Thr Glu Glu Glu Asn Ala Met Arg Lys Gly Glu Ala
 500 505 510
 Leu Gln Ala Phe Glu Lys Trp Lys Glu Lys Lys Leu Glu Tyr Leu Lys
 515 520 525
 Glu Lys Thr Arg Arg Glu Lys Glu Tyr Glu Arg Ala Lys Lys Gln Lys
 530 535 540
 Glu Glu Glu Ala Val Ala Glu Lys Lys Lys Asp Ser Leu Thr Ala Phe
 545 550 555 560
 Glu Lys Trp Ser Glu Arg Lys Glu Ala Leu Leu Lys Gln Lys Glu Lys
 565 570 575
 Glu Lys Ile Asn Glu Arg Arg Lys Glu Glu Leu Lys Arg Ala Glu Lys
 580 585 590
 Lys Asp Lys Asp Lys Gln Ala Ile Ser Glu Tyr Glu Lys Trp Leu Glu
 595 600 605

Lys Lys Glu Arg Gln Glu Arg Ile Glu Arg Lys Gln Lys Lys Arg His
 610 615 620

Ser Phe Leu Glu Ser Glu Thr His Pro Pro Trp Ser Pro Pro Ser Arg
 625 630 635 640

Thr Ala Pro Ser Lys Val Phe
 645

<210> 47

<211> 647

<212> PRT

<213> Mus musculus

<400> 47

Met Ser Asp Glu Ile Phe Ser Thr Thr Leu Ala Tyr Thr Lys Ser Pro
 1 5 10 15

Lys Ala Thr Lys Arg Thr Ser Phe Gln Asp Glu Leu Ile Arg Ala Ile
 20 25 30

Thr Ala Arg Ser Ala Arg Gln Arg Ser Ser Glu Tyr Ser Asp Asp Phe
 35 40 45

Asp Ser Asp Glu Ile Val Ser Leu Gly Glu Phe Ser Asp Thr Ser Thr
 50 55 60

Asp Glu Ser Leu Val Arg Lys Lys Met Asn Asp Phe His Ile Ser Asp
 65 70 75 80

Asp Glu Glu Lys Asn Ser Pro Arg Leu Ser Phe Leu Lys Thr Lys Lys
 85 90 95

Val Asn Arg Ala Ile Ser Asn Asp Ala Leu Asp Ser Ser Thr Pro Gly
 100 105 110

Ser Glu Gly Ser Ser Pro Asp Ala Gln Glu Asp Val Thr Gly Asp Ser
 115 120 125

Leu Pro Lys Ser Gln Asn Asp Asp Arg Glu Val Gly Arg Glu Ile Ile
 130 135 140

Thr Val Lys Pro Thr Pro Arg Met His Pro Val Lys Arg Ser Thr Ser
 145 150 155 160

Ser Gly Glu Thr Ser Ser Gly Leu Asp Ala Asp Gly His Phe Lys Pro
 165 170 175

Ser Pro Gln Pro Arg Ser Met Leu Lys Lys Ser Ser His Thr Glu Glu
 180 185 190

Gly Val Arg Pro Gly Val Asp Lys Glu His Ser Ile Ser Glu Ala Ser
 195 200 205

Ala Pro Thr Pro Ser Leu Pro Arg Gln Asn Gly Thr Glu Leu Gln Thr
 210 215 220

Glu Glu Lys Ile Tyr Ser Glu Asn Leu Asp Leu Glu Asp Ser Leu Leu
 225 230 235 240
 Gln Ser Leu Thr Ser Ser Ser Phe Lys Glu Ser Pro Gly Gly Cys Thr
 245 250 255
 Ser Pro Gly Ser Gln Glu Lys Val Pro Ile Lys Asp His Asp Gly Glu
 260 265 270
 Pro Thr Glu Ile Trp Asp Ser Leu Leu Ser Asn Glu Asn Glu Gly Ser
 275 280 285
 Ser Val Leu Val Asn Cys Val Thr Pro Glu Leu Glu Gln Pro Lys Asp
 290 295 300
 Gly Gln Val Ala Ala Asp Asp Leu Glu Glu Glu Arg Glu Lys Gly Gly
 305 310 315 320
 Phe Thr Glu Asp Asp Leu Thr Thr Asp Pro Leu Leu Ser Thr Ser Pro
 325 330 335
 Ser Val Ile Thr Pro Thr Glu Pro Ala Glu Pro Ala Lys Lys Ala Asn
 340 345 350
 Glu Asp Arg Asn Thr Lys Asn Lys Lys Thr Thr Asn Asn Arg Val Ser
 355 360 365
 Ser Ala Ser Gly Ser Arg Leu Met Thr Ser Glu Phe Leu Lys Arg Ser
 370 375 380
 Gly Pro Thr Lys Arg Ser Pro Ser Ala Ala Thr Ser Ser His Tyr Leu
 385 390 395 400
 Gly Ser Leu Lys Val Leu Asp Gln Lys Gln Pro Arg Lys Gln Ser Leu
 405 410 415
 Glu Pro Asp Lys Ala Asp His Ile Arg Ala Ala Val Tyr Gln Glu Trp
 420 425 430
 Leu Glu Lys Lys Asn Val Tyr Leu His Glu Met His Arg Ile Lys Arg
 435 440 445
 Ile Glu Ser Glu Asn Leu Arg Ile Gln Asn Glu Gln Lys Lys Ala Ala
 450 455 460
 Lys Arg Glu Glu Ala Leu Ala Ser Phe Glu Ala Trp Lys Ala Met Lys
 465 470 475 480
 Glu Lys Glu Ala Lys Arg Ile Ala Ala Lys Lys Arg Leu Glu Glu Lys
 485 490 495
 Asn Lys Lys Lys Thr Glu Glu Glu Asn Ala Met Arg Lys Gly Glu Ala
 500 505 510
 Leu Gln Ala Phe Glu Lys Trp Lys Glu Lys Lys Leu Glu Tyr Leu Lys
 515 520 525

Glu Lys Thr Arg Arg Glu Lys Glu Tyr Glu Arg Ala Lys Lys Gln Lys
530 535 540

Glu Glu Glu Ala Val Ala Glu Lys Lys Lys Asp Ser Leu Thr Ala Phe
545 550 555 560

Glu Lys Trp Ser Glu Arg Lys Glu Ala Leu Leu Lys Gln Lys Glu Lys
565 570 575

Glu Lys Ile Asn Glu Arg Arg Lys Glu Glu Leu Lys Arg Ala Glu Lys
580 585 590

Lys Asp Lys Asp Lys Gln Ala Ile Ser Glu Tyr Glu Lys Trp Leu Glu
595 600 605

Lys Lys Glu Arg Gln Glu Arg Ile Glu Arg Lys Gln Lys Lys Arg His
610 615 620

Ser Phe Leu Glu Ser Glu Thr His Pro Pro Trp Ser Pro Pro Ser Arg
625 630 635 640

Thr Ala Pro Ser Lys Val Phe
645

<210> 48

<211> 344

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
protein sequence

<400> 48

Glu Ser Gln Val Thr Ala Asp Asp Leu Glu Glu Glu Lys Ala Lys Ala
1 5 10 15

Glu Leu Ile Met Asp Asp Asp Arg Thr Val Asp Pro Leu Leu Ser Lys
20 25 30

Ser Gln Ser Ile Leu Ile Ser Thr Ser Ala Thr Ala Ser Ser Lys Lys
35 40 45

Thr Ile Glu Asp Arg Asn Ile Lys Asn Lys Lys Ser Thr Asn Asn Arg
50 55 60

Ala Ser Ser Ala Ser Ala Arg Leu Met Thr Ser Glu Phe Leu Lys Lys
65 70 75 80

Ser Ser Ser Lys Arg Arg Thr Pro Ser Thr Thr Thr Ser Ser His Tyr
85 90 95

Leu Gly Thr Leu Lys Val Leu Asp Gln Lys Pro Ser Gln Lys Gln Ser
100 105 110

Ile Glu Pro Asp Arg Ala Asp Asn Ile Arg Ala Ala Val Tyr Gln Glu
115 120 125

Trp Leu Glu Lys Lys Asn Val Tyr Leu His Glu Met His Arg Ile Lys
 130 135 140
 Arg Ile Glu Ser Glu Asn Leu Arg Ile Gln Asn Glu Gln Lys Lys Ala
 145 150 155 160
 Ala Lys Arg Glu Glu Ala Leu Ala Ser Phe Glu Ala Trp Lys Ala Met
 165 170 175
 Lys Glu Lys Glu Ala Lys Lys Ile Ala Ala Lys Lys Arg Leu Glu Glu
 180 185 190
 Lys Asn Lys Lys Lys Thr Glu Glu Glu Asn Ala Ala Arg Lys Gly Glu
 195 200 205
 Ala Leu Gln Ala Phe Glu Lys Trp Lys Glu Lys Lys Met Glu Tyr Leu
 210 215 220
 Lys Glu Lys Asn Arg Lys Glu Arg Glu Tyr Glu Arg Ala Lys Lys Gln
 225 230 235 240
 Lys Glu Glu Glu Thr Val Ala Glu Lys Lys Lys Asp Asn Leu Thr Ala
 245 250 255
 Val Glu Lys Trp Asn Glu Lys Lys Glu Ala Phe Phe Lys Gln Lys Lys
 260 265 270
 Lys Glu Lys Ile Asn Glu Lys Arg Lys Glu Glu Leu Lys Arg Ala Glu
 275 280 285
 Lys Lys Asp Lys Asp Lys Gln Ala Ile Asn Glu Tyr Glu Lys Trp Leu
 290 295 300
 Glu Asn Lys Glu Lys Gln Glu Arg Ile Glu Arg Lys Gln Lys Lys Arg
 305 310 315 320
 His Ser Phe Leu Glu Ser Glu Ala Leu Pro Pro Trp Ser Pro Pro Ser
 325 330 335
 Arg Thr Val Phe Ala Lys Val Phe
 340

<210> 49

<211> 237

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
protein sequence

<400> 49

Ser Gln Lys Gln Ser Ile Glu Pro Asp Arg Ala Asp Asn Ile Arg Ala
 1 5 10 15

Ala Val Tyr Gln Glu Trp Leu Glu Lys Lys Asn Val Tyr Leu His Glu
 20 25 30
 Met His Arg Ile Lys Arg Ile Glu Ser Glu Asn Leu Arg Ile Gln Asn
 35 40 45
 Glu Gln Lys Lys Ala Ala Lys Arg Glu Glu Ala Leu Ala Ser Phe Glu
 50 55 60
 Ala Trp Lys Ala Met Lys Glu Lys Glu Ala Lys Lys Ile Ala Ala Lys
 65 70 75 80
 Lys Arg Leu Glu Glu Lys Asn Lys Lys Lys Thr Glu Glu Glu Asn Ala
 85 90 95
 Ala Arg Lys Gly Glu Ala Leu Gln Ala Phe Glu Lys Trp Lys Glu Lys
 100 105 110
 Lys Met Glu Tyr Leu Lys Glu Lys Asn Arg Lys Glu Arg Glu Tyr Glu
 115 120 125
 Arg Ala Lys Lys Gln Lys Glu Glu Glu Thr Val Ala Glu Lys Lys Lys
 130 135 140
 Asp Asn Leu Thr Ala Val Glu Lys Trp Asn Glu Lys Lys Glu Ala Phe
 145 150 155 160
 Phe Lys Gln Lys Lys Lys Glu Lys Ile Asn Glu Lys Arg Lys Glu Glu
 165 170 175
 Leu Lys Arg Ala Glu Lys Lys Asp Lys Asp Lys Gln Ala Ile Asn Glu
 180 185 190
 Tyr Glu Lys Trp Leu Glu Asn Lys Glu Lys Gln Glu Arg Ile Glu Arg
 195 200 205
 Lys Gln Lys Lys Arg His Ser Phe Leu Glu Ser Glu Ala Leu Pro Pro
 210 215 220
 Trp Ser Pro Pro Ser Arg Thr Val Phe Ala Lys Val Phe
 225 230 235

<210> 50

<211> 170

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic protein sequence

<400> 50

Ala Met Lys Glu Lys Glu Ala Lys Lys Ile Ala Ala Lys Lys Arg Leu
 1 5 10 15
 Glu Glu Lys Asn Lys Lys Lys Thr Glu Glu Glu Asn Ala Ala Arg Lys
 20 25 30

Pro	Ser	Arg	Thr	Val	Phe	Ala	Lys	Val	Phe
				165					170

<213> Artificial Sequence

<223> Description of Artificial Sequence: Synthetic protein sequence

Asp Glu Glu Lys Asn Pro Ser Lys Leu Leu Phe Leu Lys Thr Asn Lys
85 90 95

Ser	Asn	Gly	Asn	Ile	Thr	Lys	Asp	Glu	Pro	Val	Cys	Ala	Ile	Lys	Asn	100	105	110	
Glu	Glu	Glu	Met	Ala	Pro	Asp	Gly	Cys	Glu	Asp	Ile	Val	Val	Lys	Ser	115	120	125	
Phe	Ser	Glu	Ser	Gln	Asn	Lys	Asp	Glu	Glu	Phe	Glu	Lys	Asp	Lys	Ile	130	135	140	
Lys	Met	Lys	Pro	Lys	Pro	Arg	Ile	Leu	Ser	Ile	Lys	Ser	Thr	Ser	Ser	145	150	155	160
Ala	Glu	Asn	Asn	Ser	Leu	Asp	Thr	Asp	Asp	His	Phe	Lys	Pro	Ser	Pro	165	170	175	
Trp	Pro	Arg	Ser	Met	Leu	Lys	Lys	Lys	Ser	His	Met	Glu	Glu	Lys	Asp	180	185	190	
Gly	Leu	Glu	Asp	Lys	Glu	Thr	Ala	Leu	Ser	Glu	Glu	Leu	Glu	Leu	His	195	200	205	
Ser	Ala	Pro	Ser	Ser	Leu	Pro	Thr	Pro	Asn	Gly	Ile	Gln	Leu	Glu	Ala	210	215	220	
Glu	Lys	Lys	Ala	Phe	Ser	Glu	Asn	Leu	Asp	Pro	Glu	Asp	Ser	Cys	Leu	225	230	235	240
Thr	Ser	Leu	Ala	Ser	Ser	Ser	Leu	Lys	Gln	Ile	Leu	Gly	Asp	Ser	Phe	245	250	255	
Ser	Pro	Gly	Ser	Glu	Gly	Asn	Ala	Ser	Gly	Lys	Asp	Pro	Asn	Glu	Glu	260	265	270	
Ile	Thr	Glu	Asn	His	Asn	Ser	Leu	Lys	Ser	Asp	Glu	Asn	Lys	Glu	Asn	275	280	285	
Ser	Phe	Ser	Ala	Asp	His	Val	Thr	Thr	Ala	Val	Glu	Lys	Ser	Lys	Glu	290	295	300	
Ser	Gln	Val	Thr	Ala	Asp	Asp	Leu	Glu	Glu	Glu	Lys	Ala	Lys	Ala	Glu	305	310	315	320
Leu	Ile	Met	Asp	Asp	Asp	Arg	Thr	Val	Asp	Pro	Leu	Leu	Ser	Lys	Ser	325	330	335	
Gln	Ser	Ile	Leu	Ile	Ser	Thr	Ser	Ala	Thr	Ala	Ser	Ser	Lys	Lys	Thr	340	345	350	
Ile	Glu	Asp	Arg	Asn	Ile	Lys	Asn	Lys	Lys	Ser	Thr	Asn	Asn	Arg	Ala	355	360	365	
Ser	Ser	Ala	Ser	Ala	Arg	Leu	Met	Thr	Ser	Glu	Phe	Leu	Lys	Lys	Ser	370	375	380	
Ser	Ser	Lys	Arg	Arg	Thr	Pro	Ser	Thr	Thr	Thr	Ser	Ser	His	Tyr	Leu	385	390	395	400

Gly Thr Leu Lys Val Leu Asp Gln Lys Pro Ser Gln Lys Gln Ser Ile
 405 410 415

Glu Pro Asp Arg Ala Asp Asn Ile Arg Ala Ala Val Tyr Gln Glu Trp
 420 425 430

Leu Glu Lys Lys Asn Val Tyr Leu His Glu Met His Arg Ile Lys Arg
 435 440 445

Ile Glu Ser Glu Asn Leu Arg Ile Gln Asn Glu Gln Lys Lys Ala Ala
 450 455 460

Lys Arg Glu Glu Ala Leu Ala Ser Phe Glu Ala Trp Lys
 465 470 475

<210> 52

<211> 418

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
 protein sequence

<400> 52

Met Ser Asp Glu Val Phe Ser Thr Thr Leu Ala Tyr Thr Lys Ser Pro
 1 5 10 15

Lys Val Thr Lys Arg Thr Thr Phe Gln Asp Glu Leu Ile Arg Ala Ile
 20 25 30

Thr Ala Arg Ser Ala Arg Gln Arg Ser Ser Glu Tyr Ser Asp Asp Phe
 35 40 45

Asp Ser Asp Glu Ile Val Ser Leu Gly Asp Phe Ser Asp Thr Ser Ala
 50 55 60

Asp Glu Asn Ser Val Asn Lys Lys Met Asn Asp Phe His Ile Ser Asp
 65 70 75 80

Asp Glu Glu Lys Asn Pro Ser Lys Leu Leu Phe Leu Lys Thr Asn Lys
 85 90 95

Ser Asn Gly Asn Ile Thr Lys Asp Glu Pro Val Cys Ala Ile Lys Asn
 100 105 110

Glu Glu Glu Met Ala Pro Asp Gly Cys Glu Asp Ile Val Val Lys Ser
 115 120 125

Phe Ser Glu Ser Gln Asn Lys Asp Glu Glu Phe Glu Lys Asp Lys Ile
 130 135 140

Lys Met Lys Pro Lys Pro Arg Ile Leu Ser Ile Lys Ser Thr Ser Ser
 145 150 155 160

Ala Glu Asn Asn Ser Leu Asp Thr Asp Asp His Phe Lys Pro Ser Pro
 165 170 175

Trp Pro Arg Ser Met Leu Lys Lys Lys Ser His Met Glu Glu Lys Asp
 180 185 190
 Gly Leu Glu Asp Lys Glu Thr Ala Leu Ser Glu Glu Leu Glu Leu His
 195 200 205
 Ser Ala Pro Ser Ser Leu Pro Thr Pro Asn Gly Ile Gln Leu Glu Ala
 210 215 220
 Glu Lys Lys Ala Phe Ser Glu Asn Leu Asp Pro Glu Asp Ser Cys Leu
 225 230 235 240
 Thr Ser Leu Ala Ser Ser Ser Leu Lys Gln Ile Leu Gly Asp Ser Phe
 245 250 255
 Ser Pro Gly Ser Glu Gly Asn Ala Ser Gly Lys Asp Pro Asn Glu Glu
 260 265 270
 Ile Thr Glu Asn His Asn Ser Leu Lys Ser Asp Glu Asn Lys Glu Asn
 275 280 285
 Ser Phe Ser Ala Asp His Val Thr Thr Ala Val Glu Lys Ser Lys Glu
 290 295 300
 Ser Gln Val Thr Ala Asp Asp Leu Glu Glu Glu Lys Ala Lys Ala Glu
 305 310 315 320
 Leu Ile Met Asp Asp Asp Arg Thr Val Asp Pro Leu Leu Ser Lys Ser
 325 330 335
 Gln Ser Ile Leu Ile Ser Thr Ser Ala Thr Ala Ser Ser Lys Lys Thr
 340 345 350
 Ile Glu Asp Arg Asn Ile Lys Asn Lys Lys Ser Thr Asn Asn Arg Ala
 355 360 365
 Ser Ser Ala Ser Ala Arg Leu Met Thr Ser Glu Phe Leu Lys Lys Ser
 370 375 380
 Ser Ser Lys Arg Arg Thr Pro Ser Thr Thr Thr Ser Ser His Tyr Leu
 385 390 395 400
 Gly Thr Leu Lys Val Leu Asp Gln Lys Pro Ser Gln Lys Gln Ser Ile
 405 410 415
 Glu Pro

<210> 53

<211> 303

<212> PRT

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic
protein sequence

<400> 53

```

Met Ser Asp Glu Val Phe Ser Thr Thr Leu Ala Tyr Thr Lys Ser Pro
 1           5           10           15

Lys Val Thr Lys Arg Thr Thr Phe Gln Asp Glu Leu Ile Arg Ala Ile
      20           25           30

Thr Ala Arg Ser Ala Arg Gln Arg Ser Ser Glu Tyr Ser Asp Asp Phe
      35           40           45

Asp Ser Asp Glu Ile Val Ser Leu Gly Asp Phe Ser Asp Thr Ser Ala
      50           55           60

Asp Glu Asn Ser Val Asn Lys Lys Met Asn Asp Phe His Ile Ser Asp
      65           70           75           80

Asp Glu Glu Lys Asn Pro Ser Lys Leu Leu Phe Leu Lys Thr Asn Lys
      85           90           95

Ser Asn Gly Asn Ile Thr Lys Asp Glu Pro Val Cys Ala Ile Lys Asn
      100           105           110

Glu Glu Glu Met Ala Pro Asp Gly Cys Glu Asp Ile Val Val Lys Ser
      115           120           125

Phe Ser Glu Ser Gln Asn Lys Asp Glu Glu Phe Glu Lys Asp Lys Ile
      130           135           140

Lys Met Lys Pro Lys Pro Arg Ile Leu Ser Ile Lys Ser Thr Ser Ser
      145           150           155           160

Ala Glu Asn Asn Ser Leu Asp Thr Asp Asp His Phe Lys Pro Ser Pro
      165           170           175

Trp Pro Arg Ser Met Leu Lys Lys Lys Ser His Met Glu Glu Lys Asp
      180           185           190

Gly Leu Glu Asp Lys Glu Thr Ala Leu Ser Glu Glu Leu Glu Leu His
      195           200           205

Ser Ala Pro Ser Ser Leu Pro Thr Pro Asn Gly Ile Gln Leu Glu Ala
      210           215           220

Glu Lys Lys Ala Phe Ser Glu Asn Leu Asp Pro Glu Asp Ser Cys Leu
      225           230           235           240

Thr Ser Leu Ala Ser Ser Ser Leu Lys Gln Ile Leu Gly Asp Ser Phe
      245           250           255

Ser Pro Gly Ser Glu Gly Asn Ala Ser Gly Lys Asp Pro Asn Glu Glu
      260           265           270

Ile Thr Glu Asn His Asn Ser Leu Lys Ser Asp Glu Asn Lys Glu Asn
      275           280           285

Ser Phe Ser Ala Asp His Val Thr Thr Ala Val Glu Lys Ser Lys
      290           295           300

```